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1999
Project No. F-
STPP 84-4(6)22
Four Corners -
west, control no.
1831 in Gallatin
County

FOUR CORNERS - WEST

F-STPP 84-4(6)22

CONTROL NO. 1831

GALLATIN COUNTY, MONTANA

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ENVIRONMENTAL ASSESSMENT

May 1999

STATE OF MONTANA DEPARTMENT OF TRANSPORTATION
AND
U.S. DEPARTMENT OF TRANSPORTATION,
FEDERAL HIGHWAY ADMINISTRATION

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PROJECT NO. F-STPP 84-4(6)22
Four Corners - West
Control No. 1831
in
Gallatin County

ENVIRONMENTAL ASSESSMENT

This document is prepared in conformance with MEPA requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2) and 18.2.239. It is also prepared in conformance with NEPA requirements for an Environmental Assessment under 23 CFR 771.119.

Submitted pursuant to 42 U.S.C. 4332(2) (c) 49 U.S.C. 303
and Sections 2-3-104,75-1-201 M.C.A.
by the

State of Montana Department of Transportation

and

U.S. Department of Transportation
Federal Highway Administration

Submitted by: Karl M Helvik Date: May 11, 1999
State of Montana Department of Transportation

Reviewed and Approved for Distribution: Date: 5-27-99
Federal Highway Administration

The following persons may be contacted for additional information concerning this document:

Joel M. Marshik, P.E.
Manager - Environmental Services
Montana Department of Transportation
2701 Prospect Avenue
P.O. Box 201001
Helena, Montana 59620-1001

Janice W. Brown, Administrator
Region #8, Montana Division
Federal Highway Administration
2880 Skyway Drive
Helena, Montana 59602

Prepared by

FORSGREN
ASSOCIATES / INC.

West Yellowstone, Montana
(800-331-7548)

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1.0 INTRODUCTION

1.0 INTRODUCTION

This Chapter gives the background on the stretch of highway being considered for improvement and describes the nature of the proposed improvements. It also presents the purpose and need for the proposed action which will provide the basis for the development and evaluation of alternatives discussed in the following chapter. Anticipated impacts are discussed in Chapter 3.0.

1.1 DESCRIPTION OF THE PROPOSED ACTION

The proposed action consists of the reconstruction and realignment of a portion of Montana Primary Route P-84 (Norris Road) in Gallatin County, Montana to updated standards of design and safety. The proposed project is known as the Four Corners - West, project number F-STPP 84-4(6)22. It begins just east of the Little Holland Road km 35.6(M.P. 22.1, Station 39+00) and extends easterly approximately 10.8 km (M.P. 28.8, Station 147+27.92). It also includes approximately 0.9 km (0.6 miles) of realignment of Amsterdam Road (State Secondary Route S-288 - a local county road connection) at approximately km 40.7 (M.P. 25.3) or Station 88+20.28. The general project location and vicinity are shown in Figure 1 and the translites (aerial photos) are contained in Appendix E. The scope of work for this project is in accordance with the Geometric Design Standards, February 25, 1994.

The roadway will be fully reconstructed in accordance with current Montana Department of Transportation (MDT) standards to meet a 100 km/h (62 mph) design speed consistent with the surrounding terrain. Actual posted speed limits throughout the project will remain as presently constituted. Any changes in the posted speed limits would come as a result of future speed zone studies.

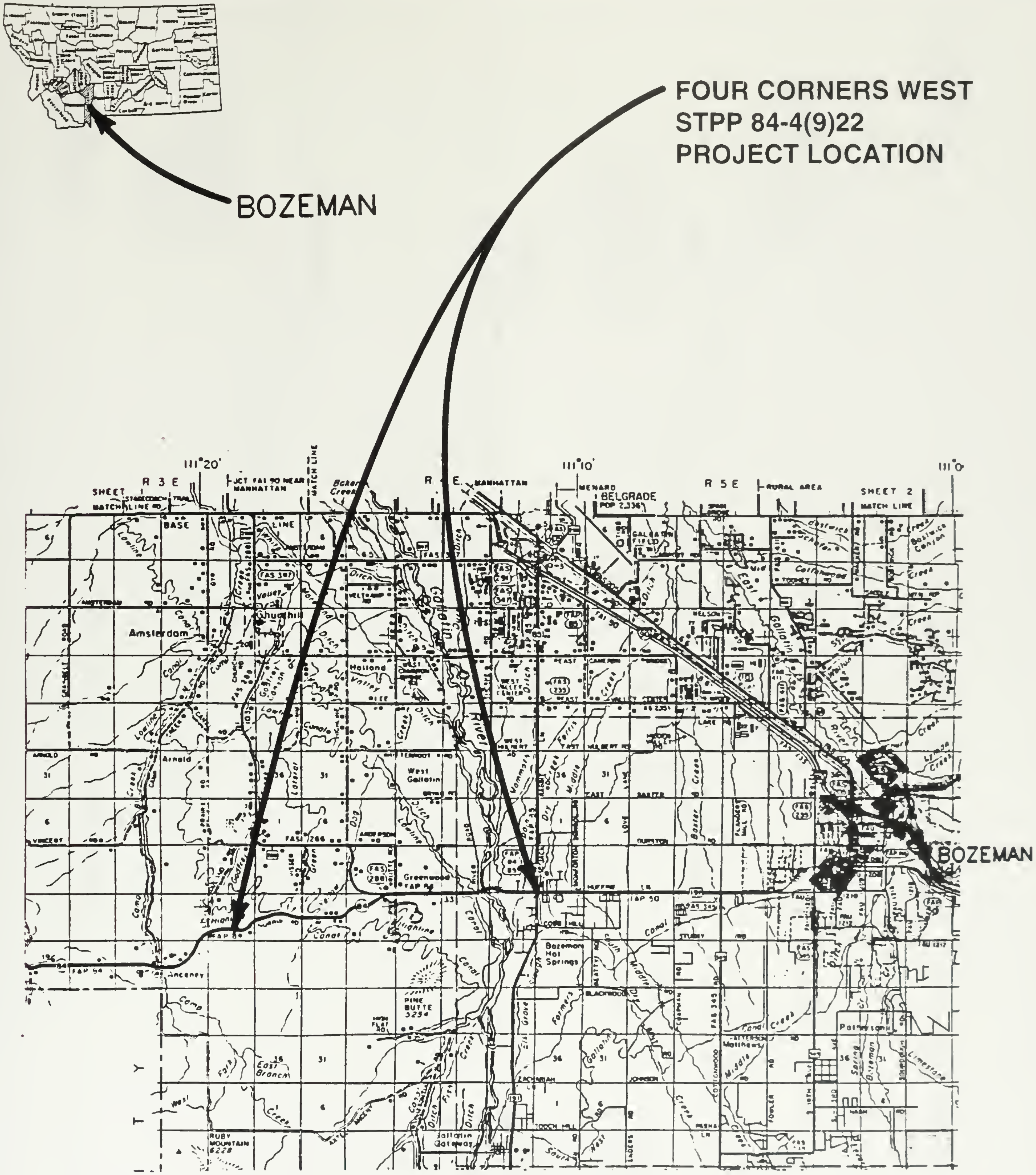
The existing 7.3 m (24.0 ft) pavement is too narrow for present and future needs and should be widened if improvements are constructed. Four principal typical roadway sections will be used for the proposed highway improvement project, as shown in Figure 2a, 2b, 2c, 2d, and 2e. The typical sections include:

- Beginning of project to Amsterdam Road (Station 39+00 to 87+79.18) 9.6 m (32.0 ft) wide, paved, rural section consisting of a 3.6 m (11.8 ft) driving lane and a 1.2 m (4.0 ft) shoulder each side of centerline (Figure 2a).

- Amsterdam Road to End of Project (Station 87+79.18 to 147+27.92): 12.0 m (39.4 ft) wide, paved, rural section consisting of a 3.6 m (11.8 ft) driving lane and a 2.4 m (7.9 ft) shoulder each side of centerline (Figures 2b and 2d).

- Right Turning Lane for Amsterdam Road (Station 88+09 to 89+06): 15.6 m (51.2 ft) wide, paved rural section consisting of two 3.6 m (11.8 ft) driving lanes, one 3.6 m (11.8 ft) turning lane, and one 2.4 m (7.9 ft) shoulder each side of centerline (Figure 2c).

- Amsterdam Road Realignment (Station 10+00 to 19+02.67): 8.6 m (28.2 ft) wide, paved, rural section consisting of a 3.6 m (11.8 ft) driving lane and a 0.7 m (2.3 ft) shoulder each side of centerline (Figures 2d and 2e).



FOUR CORNERS WEST
STPP 84-4(9)22
PROJECT LOCATION

FORSGREN
ASSOCIATES / P.A.

LOCATION MAP

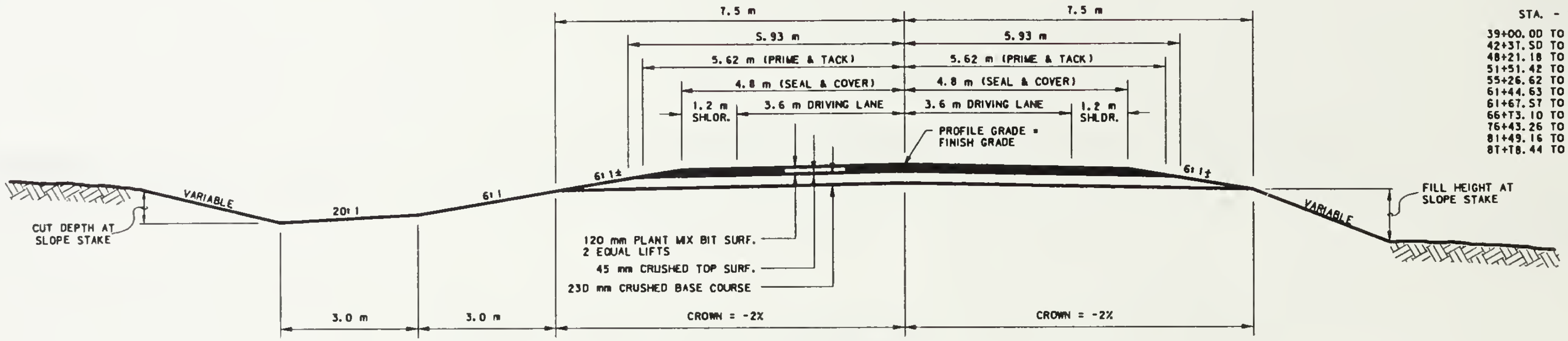
FIGURE NO
FIG. 1

PROJECT NO
91200

STATE	PROJECT NUMBER	SHEET NO.
MONTANA	STPP [illegible]	7

FOUR CORNERS - WEST

TYPICAL SECTION NO. 1



STA. - STA.

39+00.00 TO 42+37.50
42+37.50 TO 43+14.64 TRANS. TO TYP. 2
48+21.18 TO 49+11.44 TRANS. TO TYP. 2
51+51.42 TO 55+26.62
55+26.62 TO 56+06.62 TRANS. TO TYP. 2
61+44.63 TO 61+67.57
61+67.57 TO 62+57.57 TRANS. TO TYP. 2
66+73.10 TO 76+43.26
76+43.26 TO 77+27.26 TRANS. TO TYP. 2
81+49.16 TO 87+78.44
87+78.44 TO 87+96.44 TRANS. TO TYP. 3

QUANTITIES											
UNIT	GRAVEL					UNIT	BITUMINOUS MATERIAL				
	COVER	PLANT MIX	CR. TOP SURF.	CR. BASE COURSE			ASPHALT CEMENT	PRIME	SEAL	TACK	
AREA m² m³ PER STATION t PER STATION	 13.4	1.250 125.0 285.9	0.520 52.0	3.089 308.9		m² PER STATION t PER STATION L PER STATION	 17.15	1124 1.61	960 1.55	1124 259	

BACK SLOPES	
0 - 1.5 m	5:1
1.5 - 3 m	4:1
3 - 4.5 m	3:1
4.5 - 6 m	2:1
OVER 6 m	1½:1

SEE CROSS-SECTIONS FOR DEVIATIONS

FILL SLOPES	
0 - 3 m	6:1
3 - 6 m	4:1
6 - 9 m	3:1
OVER 9 m	2:1

SEE CROSS-SECTIONS FOR DEVIATIONS

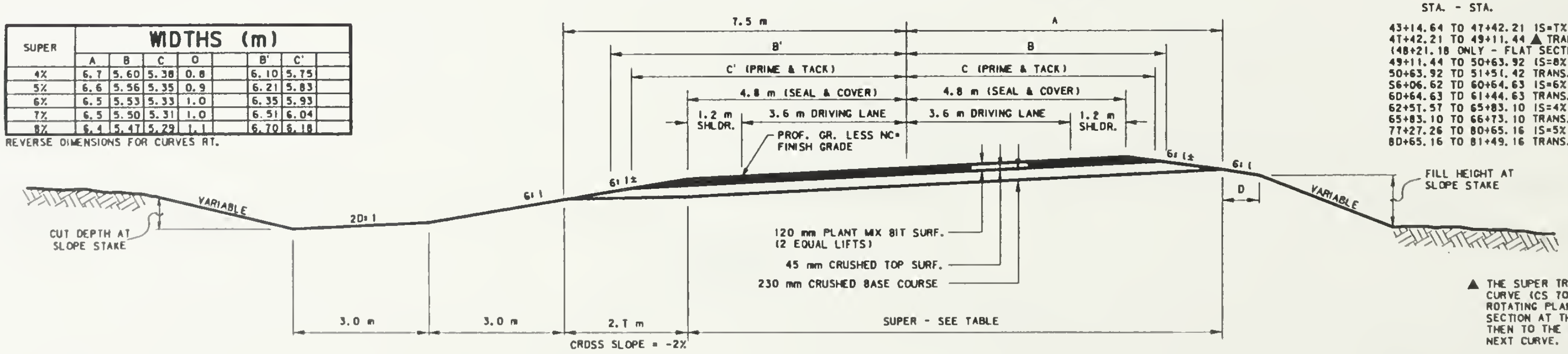
TYPICAL SECTION NO. 2

SUPER	WIDTHS (m)							
	A	B	C	D		B'	C'	
4%	6.7	5.60	5.38	0.8		6.10	5.75	
5%	6.6	5.56	5.35	0.9		6.21	5.83	
6%	6.5	5.53	5.33	1.0		6.35	5.93	
7%	6.5	5.50	5.31	1.0		6.51	6.04	
8%	6.4	5.47	5.29	1.1		6.70	6.18	

REVERSE DIMENSIONS FOR CURVES RT.

STA. - STA.

43+14.64 TO 47+42.21 (S=7% LT.)
47+42.21 TO 49+11.44 ▲ TRANS. TO TYP. 2 RT.
(48+21.18 ONLY - FLAT SECTION)
49+11.44 TO 50+63.92 (S=8% RT.)
50+63.92 TO 51+51.42 TRANS. TO TYP. 1
56+06.62 TO 60+64.63 (S=6% RT.)
60+64.63 TO 61+44.63 TRANS. TO TYP. 1
62+57.57 TO 65+83.10 (S=4% LT.)
65+83.10 TO 66+73.10 TRANS. TO TYP. 1
77+27.26 TO 80+65.16 (S=5% LT.)
80+65.16 TO 81+49.16 TRANS. TO TYP. 1



▲ THE SUPER TRANSITION FROM CURVE TO CURVE (CS TO SC) IS A CONTINUOUS ROTATING PLANE TO A FULL WIDTH FLAT SECTION AT THE NOTED STATION AND THEN TO THE REVERSE SUPER FOR THE NEXT CURVE.

FOR QUANTITIES SEE TYPICAL SECTION NO. 1

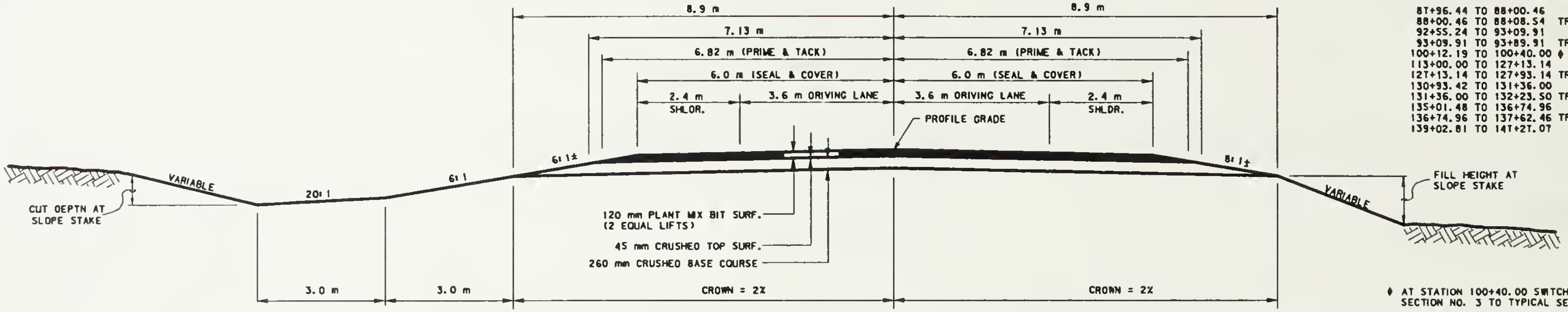
PRELIMINARY

FIGURE 2a

STATE	PROJECT NUMBER	SHEET NO.
MONTANA	STPP [illegible]	8

FOUR CORNERS - WEST

TYPICAL SECTION NO. 3



STA. - STA.

87+96.44 TO 88+00.46
88+00.46 TO 88+08.54 TRANS. TO TYP. 5
92+55.24 TO 93+09.91
93+09.91 TO 93+89.91 TRANS. TO TYP. 4
100+12.19 TO 100+40.00 ♦
113+00.00 TO 127+13.14
127+13.14 TO 127+93.14 TRANS. TO TYP. 4
130+93.42 TO 131+36.00
131+36.00 TO 132+23.50 TRANS. TO TYP. 4
135+01.48 TO 136+74.96
136+74.96 TO 137+62.46 TRANS. TO TYP. 4
139+02.81 TO 147+27.07

♦ AT STATION 100+40.00 SWITCH FROM TYPICAL SECTION NO. 3 TO TYPICAL SECTION NO. 7

QUANTITIES

UNIT	GRAVEL					UNIT	BITUMINOUS MATERIAL				
	COVER	PLANT MIX	CR. TOP SURF.	CR. BASE COURSE			ASPHALT CEMENT	PRIME	SEAL	TACK	
AREA m^2		1.530	0.620	4.160		m^2 PER STATION		1364	1200	1364	
m^3 PER STATION		153.0	62.0	416.0		† PER STATION	21.10	1.95	1.93		
+ PER STATION	16.0	351.7				L PER STATION				314	

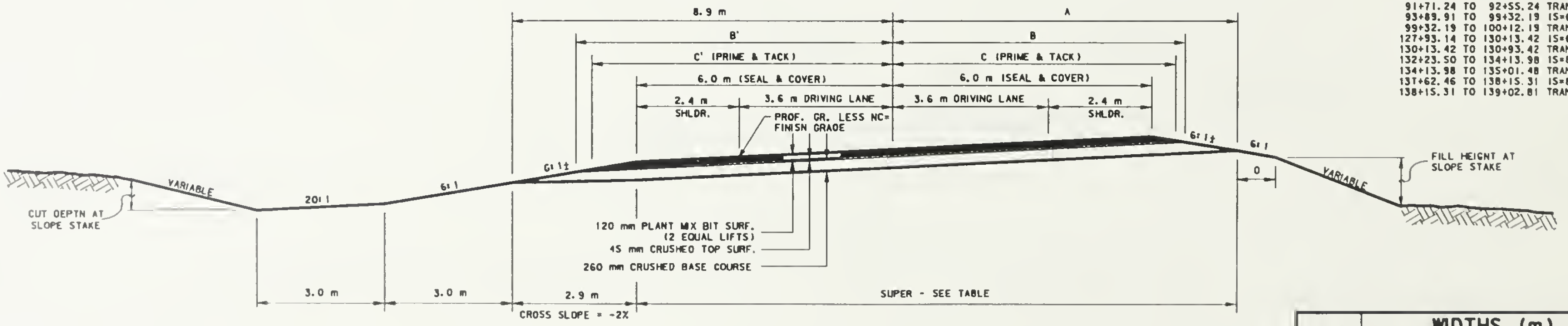
BACK SLOPES	
0 - 1.5 m	5:1
1.5 - 3 m	4:1
3 - 4.5 m	3:1
4.5 - 6 m	2:1
OVER 6 m	1½:1

SEE CROSS-SECTIONS FOR DEVIATIONS

FILL SLOPES	
0 - 3 m	6:1
3 - 6 m	4:1
6 - 9 m	3:1
OVER 9 m	2:1

SEE CROSS-SECTIONS FOR DEVIATIONS

TYPICAL SECTION NO. 4



STA. - STA.

91+21.37 TO 91+71.24 (S=5% LT.)
91+71.24 TO 92+55.24 TRANS. TO TYP. 3
93+89.91 TO 99+32.19 (S=6% RT.)
99+32.19 TO 100+12.19 TRANS. TO TYP. 3
127+93.14 TO 130+13.42 (S=6% LT.)
130+13.42 TO 130+93.42 TRANS. TO TYP. 3
132+23.50 TO 134+13.98 (S=8% RT.)
134+13.98 TO 135+01.48 TRANS. TO TYP. 3
137+62.46 TO 138+15.31 (S=8% LT.)
138+15.31 TO 139+02.81 TRANS. TO TYP. 3

SUPER	WIDTHS (m)							
	A	B	C	D		B'	C'	
5%	8.0	6.76	6.55	0.9		7.41	7.03	
6%	7.9	6.73	6.53	1.0		7.55	7.13	
8%	7.7	6.67	6.49	1.2		7.90	7.39	

REVERSE DIMENSIONS FOR CURVES RT.

FOR QUANTITIES SEE TYPICAL SECTION NO. 3

PRELIMINARY

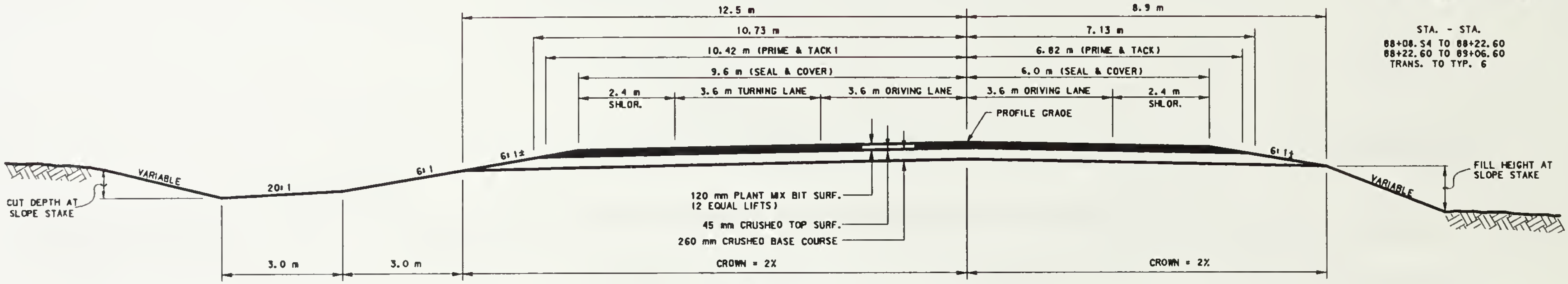
FIGURE 2b

STATE	PROJECT NUMBER	SHEET NO.
MONTANA	STPP 64-[illegible]	9

FOUR CORNERS - WEST

TYPICAL SECTION NO. 5

STA. - STA.
88+08.54 TO 88+22.60
88+22.60 TO 89+06.60
TRANS. TO TYP. 6



QUANTITIES											
UNIT	GRAVEL					UNIT	BITUMINOUS MATERIAL				
	COVER	PLANT MIX	CR. TOP SURF.	CR. BASE COURSE			ASPHALT CEMENT	PRIME	SEAL	TACK	
AREA m²		1.970	0.790	5.104		m² PER STATION		1724	1560	1724	
m³ PER STATION		197.0	79.0	510.4		t PER STATION	27.03	2.46	2.51		
t PER STATION	21.8	450.5				L PER STATION				397	

BACK SLOPES	
0 - 1.5 m	5:1
1.5 - 3 m	4:1
3 - 4.5 m	3:1
4.5 - 6 m	2:1
OVER 6 m	1½:1

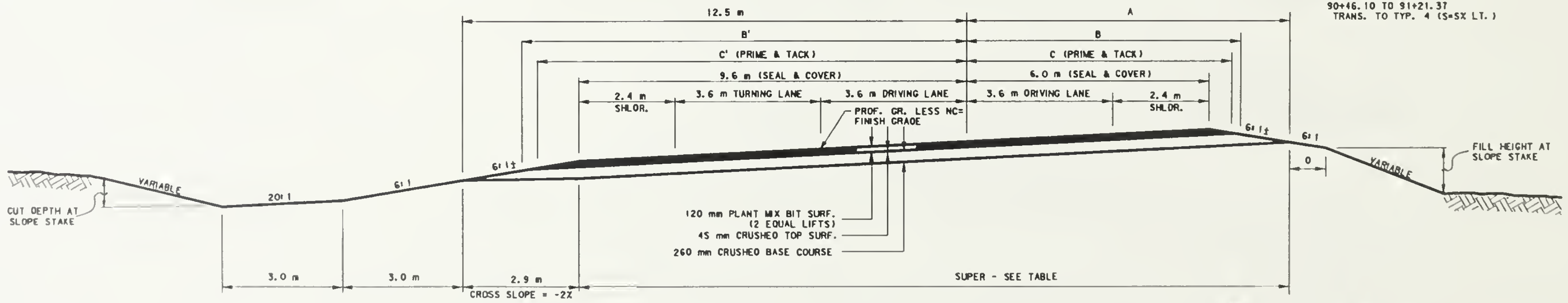
SEE CROSS-SECTIONS
FOR DEVIATIONS

FILL SLOPES	
0 - 3 m	6:1
3 - 6 m	4:1
6 - 9 m	3:1
OVER 9 m	2:1

SEE CROSS-SECTIONS
FOR DEVIATIONS

TYPICAL SECTION NO. 6

STA. - STA.
89+06.60 TO 90+46.10 (S=5% LT.)
90+46.10 TO 91+21.37
TRANS. TO TYP. 4 (S=5% LT.)



SUPER	WIDTHS (m)							
	A	B	C	O		B'	C'	
5%	8.0	6.76	6.55	0.9		11.09	10.63	
6%	7.9	6.73	6.53	1.0		11.15	10.73	
8%	7.7	6.67	6.49	1.2		11.50	10.98	

REVERSE DIMENSIONS FOR CURVES RT.

FOR QUANTITIES SEE TYPICAL SECTION NO. 5

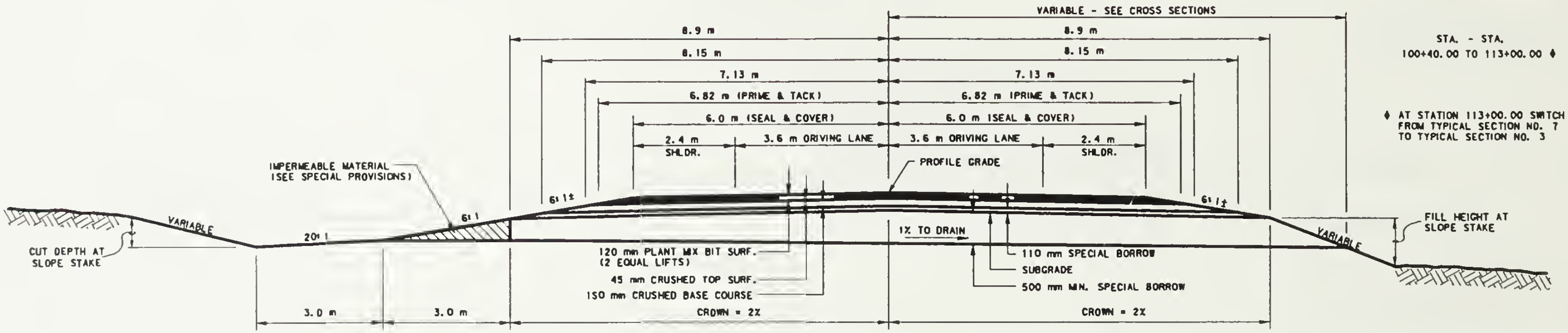
PRELIMINARY

FIGURE 2c

STATE	PROJECT NUMBER	SHEET NO.
MONTANA	STPP 04-[illegible]	[illegible]

FOUR CORNERS - WEST

TYPICAL SECTION NO. 7



STA. - STA.
100+40.00 TO 113+00.00 ◆

◆ AT STATION 113+00.00 SWITCH FROM TYPICAL SECTION NO. 7 TO TYPICAL SECTION NO. 3

REFER TO ?? FOR SPECIAL BORROW QUANTITIES

QUANTITIES

UNIT	GRAVEL					UNIT	BITUMINOUS MATERIAL				
	COVER	PLANT MIX	CR. TOP SURF.	CR. BASE COURSE			ASPHALT CEMENT	PRIME	SEAL	TACK	
AREA m²		1.038	0.628	2.282		m² PER STATION		1364	1200	1364	
m³ PER STATION		153.8	62.8	229.2		t PER STATION	21.10	1.95	1.83		
t PER STATION	16.8	351.7				L PER STATION				314	

BACK SLOPES	
0 - 1.5 m	5:1
1.5 - 3 m	4:1
3 - 4.5 m	3:1
4.5 - 6 m	2:1
OVER 6 m	1½:1

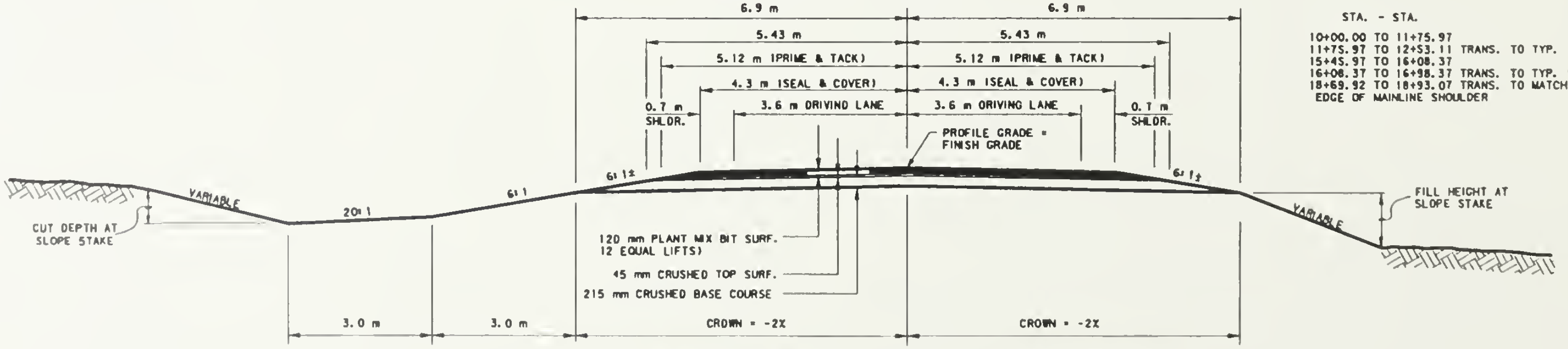
SEE CROSS-SECTIONS FOR DEVIATIONS

FILL SLOPES	
0 - 3 m	6:1
3 - 6 m	4:1
6 - 9 m	3:1
OVER 9 m	2:1

SEE CROSS-SECTIONS FOR DEVIATIONS

TYPICAL SECTION NO. 8

AMSTERDAM ROAD



STA. - STA.

10+00.00 TO 11+75.97
11+75.97 TO 12+53.11 TRANS. TO TYP. 9
15+45.97 TO 16+08.37
16+08.37 TO 16+98.37 TRANS. TO TYP. 9
18+69.92 TO 18+93.07 TRANS. TO MATCH
EDGE OF MAINLINE SHOULDER

QUANTITIES

UNIT	GRAVEL					UNIT	BITUMINOUS MATERIAL				
	COVER	PLANT MIX	CR. TOP SURF.	CR. BASE COURSE			ASPHALT CEMENT	PRIME	SEAL	TACK	
AREA m²		1.130	0.419	2.651		m² PER STATION		1024	860	1024	
m³ PER STATION		113.0	47.5	265.1		t PER STATION	15.50	1.46	1.38		
t PER STATION	12.0	258.4				L PER STATION				236	

PRELIMINARY

FIGURE 2d

STATE	PROJECT NUMBER	SHEET NO.
MONTANA	STPP [illegible]	11

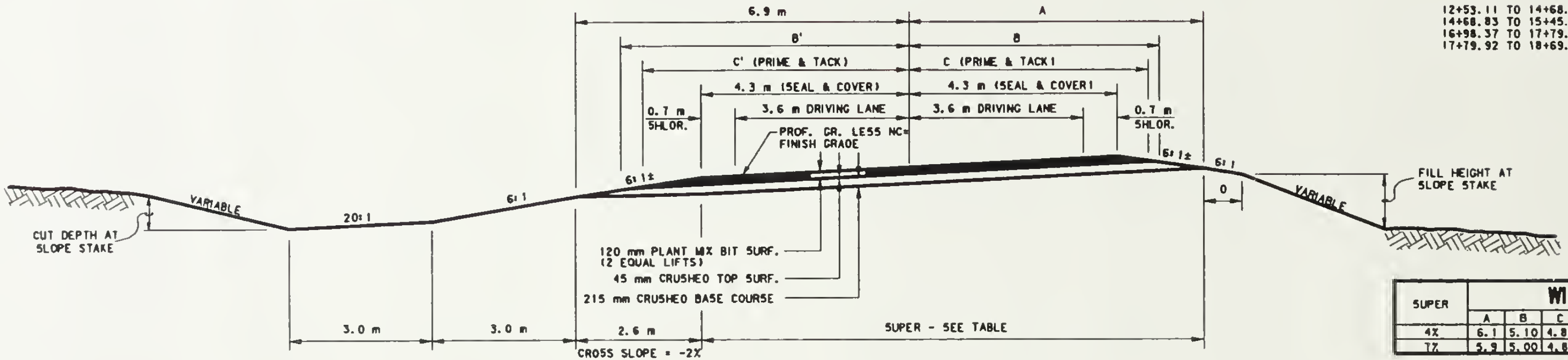
FOUR CORNERS - WEST

TYPICAL SECTION NO. 9

AMSTERDAM ROAD

STA. - STA.

12+53.11 TO 14+68.83 (S=7% RT.)
14+68.83 TO 15+45.97 TRANS. TO TYP. 8
16+98.37 TO 17+79.92 (S=4% LT.)
17+79.92 TO 18+69.92 TRANS. TO TYP. 8



SUPER	WIDTHS (m)							
	A	B	C	D		B'	C'	
4%	6.1	5.10	4.88	0.8		5.60	5.25	
7%	5.9	5.00	4.81	1.0		6.01	5.54	

REVERSE DIMENSIONS FOR CURVES RT.

FOR QUANTITIES SEE TYPICAL SECTION NO. 7

BACK SLOPES	
0 - 1.5 m	5:1
1.5 - 3 m	4:1
3 - 4.5 m	3:1
4.5 - 6 m	2:1
OVER 6 m	1½:1

SEE CROSS-SECTIONS FOR DEVIATIONS

FILL SLOPES	
0 - 3 m	6:1
3 - 6 m	4:1
6 - 9 m	3:1
OVER 9 m	2:1

SEE CROSS-SECTIONS FOR DEVIATIONS

PRELIMINARY

FIGURE 2e

The project construction will also include grading, drainage and irrigation crossings, signing, pavement markings, topsoiling, seeding, fencing, plant mix surfacing, striping, signing, right-of-way acquisition and necessary utility relocation. There are several crossings of major irrigation canals which will be accomplished by the use of large Reinforced Concrete Box (RCB) culverts. The presence of these crossings creates a constraint in the vertical alignment to match the existing elevations in these areas.

Two bridges exist within the project limits. The first is Shedd's Bridge over the Gallatin River at km 44.7 (M.P. 27.8), which was constructed in 1987. It was constructed to modern standards and thus will be incorporated "as is" into this project. The second bridge is a 12.2 m (40.0 ft) long structure over the Spain Ferris Ditch at km 45.2 (M.P. 28.1). This structure will be replaced with a RCB culvert.

The new horizontal alignment will predominately follow the existing highway corridor with the exception of flattening substandard curves and eliminating some horizontal curves by straightening the alignment between Station 76+00 and Station 100+00 (discussed later in the alternative section). The vertical alignment will also follow the existing, but flattening substandard vertical curves and reducing steep vertical grades wherever possible. Some existing grades and vertical curvature may remain at major irrigation canal crossings to accommodate the canal elevations.

The highway corridor passes through two types of terrain. On the easterly portion of the project, the corridor crosses the Gallatin River plain, a relatively flat area formed by alluvial deposition associated with the Gallatin River. Westerly from the Gallatin River crossing to the beginning of the project, the corridor passes through rolling terrain created by erosion of the Gallatin River range. Runoff from the mountains has eroded deep ravines in the wind-deposited silt material prevalent in the area, creating a rolling terrain necessitating vertical curvature and horizontal alignment changes in many locations.

The majority of the project, particularly that portion west of the Gallatin River, is dry farm or pasture area with an agricultural base and rural farmsteads. East of the Gallatin River to the Four Corners intersection is a moderately developed residential and light industrial area. The City of Bozeman lies approximately 16.0 km (9.9 miles)east of the project location and forms the major cultural and socioeconomic center for the area. Urban growth westward from Bozeman has resulted in urban and semi-urban type development to the Gallatin River.

Existing rights-of-way vary throughout the project from a minimum of 30.5 m (100.0 ft) to over 61.0 m (200.0 ft) in large cut and fill areas west of the Gallatin River. The proposed project would utilize existing rights-of-way as much as possible to reduce impact on adjacent properties. However, some new right-of-way will be required on one or both sides of the highway for most of the project. Existing accesses will remain if they are still being used. The project is proposed to be a limited access facility.

Other related projects in the vicinity of the proposed action include the completed Bozeman - Four Corners project (F 50-2(4)82) immediately adjacent on the east end of this project and the Madison River - East project (STPP 84-2(4)12) immediately adjacent to this project on the west end.

This project is being developed by the Montana Department of Transportation (MDT), which is directly responsible for all phases of project development. Further information can be obtained by contacting MDT at the Butte or Helena offices or the Consultant's Project Manager at 1-800-331-7548.

1.2 PURPOSE AND NEED

Montana Primary Route P-84 is part of an extensive system of rural arterial routes important to interstate, statewide, and regional travel. This route is a vital element contributing to the local and regional economy which is heavily oriented toward agricultural farm-to-market traffic and also recreational/tourism traffic accessing the Madison River basin. This route connects Bozeman on the east to Norris on the west, both of which also are connecting points for interstate and intrastate highways.

The primary objectives of the proposed action are as follows:

- To improve highway safety and convenience by updating to current standards to overcome narrow width, steep shoulders, sharp curves, and steep grades.
- To correct deficiencies in the condition and performance of the existing pavement structure to allow it to carry current and projected traffic loads and volumes.
- To provide a modern highway facility capable of safely accommodating present and projected traffic volumes while being compatible with the human and natural environment.
- To improve the safety and traffic flow at the Amsterdam Road connection.
- To connect to and be a compatible part of other improvement projects on Montana 84 under construction or proposed for the regional area.

The existing highway was constructed during various projects in the mid 1950's. At the time, the highway was designed as a best fit to existing terrain. No major improvements or modifications of the highway have been undertaken since the time of initial construction. Accordingly, the existing pavement is in poor condition with a narrow width (7.3 m (24.0 ft) or less in most locations), surface break up, and rutting, which require extensive annual maintenance.

There are ten horizontal curves on the existing alignment with degrees of curvature ranging from 2° to 6°. A county road known as Amsterdam Road intersects the main highway at a sharp angle. At this location, the main highway has a 9° horizontal curve. This particular intersection has been the location of several accidents and has received some improvement via safety projects. The sharp angle of intersection and the steep grade immediately to the west along Amsterdam Road suggest realignment of Amsterdam Road and relocation of the intersection location for safety reasons.

Of the other nine horizontal curves, three exceed the 4°45' degree of curvature standard associated with a 100 km/h (62 mph)design speed. One of the primary objectives of this project will be to eliminate substandard horizontal curvature to improve traffic safety, reduce accidents, and provide for more efficient traffic flow and highway performance.

The sharply rolling terrain has also produced corresponding steep vertical grades in several areas. Current MDT standards calls for a 4% maximum grade for a 100 km/h (62 mph) design speed. There are four areas where this is exceeded with grades in the 7% range. There are also six locations where the existing vertical curves do not meet current design standards for the existing

posted speed of 89 km/h (55 mph). Another primary objective of this project will be to reduce vertical grades and flatten sharp vertical curvature wherever possible to improve safety and performance of the highway.

Current MDT standards call for a 8.6 m (28.2 ft) minimum width for safely conveying the existing traffic. As the traffic volumes increase in the future (see Table 1 below), a 12.0 m (39.4 ft) minimum width will be warranted. The existing 7.3 m (24.0 ft) pavement requires widening to meet these conditions. Even if widened, the sideslopes in many large fill areas are quite steep, which doesn't provide a recovery area or a reduction in overturning potential for vehicles inadvertently leaving the roadway. Therefore, an additional primary objective of this project will be to provide improved safety by widening the highway and providing flatter shoulders and side slopes free of obstructions to allow vehicle recovery. The 12.0 m (39.4 ft) width is also required to be able to provide the 2.4 m (7.9 ft) shoulders necessary to accommodate bicycle traffic.

The increased volume of traffic and the increased weight of truck loadings have taken their toll on the existing pavement. In many areas, deterioration has advanced to the point that reconstruction with thickened gravel layers and pavement will be the only means of accommodating increased volume and weight. Doing so will also greatly reduce operation and maintenance expenses presently being employed as a temporary solution.

The improvements are not expected to generate a significant amount of additional traffic beyond the increases that would occur with the "no-action" alternative. The improvements are expected to have a beneficial impact on traffic operations and safety by providing flatter sideslopes and a safe recovery zone, reducing some steep vertical grades, flattening sharp horizontal curves, and widening the existing roadway.

Existing and projected traffic volumes are summarized in Table 1 according to two MDT memorandums dated March 5, 1993 and August 7, 1996.

TABLE 1
EXISTING AND PROJECTED TRAFFIC VOLUMES

	Beg of Project to Amsterdam Road	**Amsterdam Road to End of Project**	**Amsterdam Road Realignment**
1998 ADT (present)	1380	3180	610
2018 ADT (Design year)	2450	5640	1200
DHV	420	960	150
$\overline{D}$	55 - 45%	55 - 45%	55 - 45%
T	7.4%	3.8%	6.0%
All trucks	40.0%	37.7%	32.4%
80^{kn} equiv axle loads	67.78 daily	82.62 daily	17.51 daily

The increase in traffic projected for the next 20 years in this high growth area will emphasize the substandard features of the existing highway, unless improvements are made. The proposed improvements to this highway will alleviate these concerns providing a safer, more efficient highway.

A review of accident statistics from the Department of Transportation for this stretch of highway shows the accident rate of 1.84 exceeding the statewide average of 1.72, while the severity rate of 1.49 is slightly lower than the statewide average of 1.53. Many of these are associated with the Amsterdam Road connection, as earlier discussed. However, the sharp horizontal and vertical curvature discussed earlier are also contributing factors. Improving the facility to modern standards will likely contribute substantially to a reduction in accident rates.

Lastly, major improvement projects that have been built and are proposed immediately adjacent to this project at each end. The project on the east end has just been completed and the one on the west end is currently in the design phase. Improvements to those segments of highway will meet current safety standards, leaving this stretch of highway severely deficient between the two. Aside from the safety and maintenance concerns described above, the narrow width and poor alignment would likely contribute to increased congestion as traffic flow is impeded by these substandard conditions.

Overall, the proposed project will increase roadway width, flatten vertical and horizontal curves, reduce vertical grades where possible, improve sight distance, flatten side slopes, and provide a greater recovery area for safety. These improvements will enhance safety and improve driving conditions for the traveling public.

2.0 ALTERNATIVES

2.0 ALTERNATIVES

2.1 INTRODUCTION

General alternatives associated with this project relate to the overall project approach -- should the highway be reconstructed, or just be left alone? Overall project alternatives considered therefore include "no action", and reconstruction. Additionally, two (2) specific alignment options were developed associated with straightening substandard curvature between km 39.1 (M.P. 24.3) (Station 76+00) and km 41.5 (M.P. 25.8) (Station 100+00) (including eliminating one curve altogether) and also to realign the connection of Amsterdam Road to the highway. Montana highway and bridge projects are developed to meet or exceed the minimum American Association of State Highway and Transportation Officials (AASHTO) guidelines as well as MDT's design standards. Considering the many major deficiencies of the existing road, substantial upgrading was required for it to meet these guidelines and standards. Therefore, alternates that met current AASHTO and MDT design requirements were developed to replace the current roadway. The objective of this Chapter is to present and evaluate the specific alignment options relative to the purpose and needs of this project stated in the previous chapter.

2.2 PROJECT ALTERNATIVES

The information that follows compares and evaluates the overall project alternatives (described above) with reference to the purpose and need for this project.

2.2.1 No Action: This alternative would continue the use of the existing roadway in a "status quo" condition without construction of any needed improvements. Existing horizontal and vertical alignment would remain unchanged, and no provision would be made for widening or surface improvements of the roadway. The Amsterdam Road intersection would also remain unchanged. The no action alternative allows least impact but at the same time offers no improvement over existing conditions. Under this alternative, the existing substandard horizontal and vertical alignment would continue; substandard safety conditions would be perpetuated; and traffic flow, capacity, and performance of the existing facility will continue to decrease. The existing deteriorated pavement would remain, and the high maintenance costs would continue to increase.

This alternative would have minimal impact on the local environment other than restricted traffic volume and flow, and perhaps discouraging or limiting growth in the area as a result of poor transportation facilities. There will be minimal economic impact since funds will not be expended for improvements to the highway. The local economy will likely remain much the same as existing since growth and development will likely be attracted to other improved areas.

This alternative would not meet any of the objectives stated under "Purpose and Need", and the narrow width would be inconsistent with the Transportation Department's Development Plan for existing area transportation facilities and future adjoining construction projects.

2.2.2 Reconstruction: This alternative would provide for reconstruction of the roadway to current safety standards. This would allow flattening of substandard horizontal curves, and easing of steep vertical grades wherever possible. It would also allow for reconstructing the roadway to current safety standards, including a wider traveling surface and flatter side slopes in cut and fill areas. It would provide for an improved roadway pavement section to carry modern highway loads. The nature of reconstruction would also permit the realignment of the Amsterdam Road and its connection to Montana Primary Route P-84 (Norris Road) to be constructed. This alternative would have more of an impact than the no action alternative but would provide for achieving all of the primary objectives stated in the Purpose and Need in Chapter 1.0. This alternative would allow correction of substandard horizontal and vertical alignment, providing for improved safety conditions with longer sight distance, flatter sideslopes, etc., and improved traffic flow and performance by straightening the alignment and widening the facility. It would also improve the surfacing section to carry modern traffic loads.

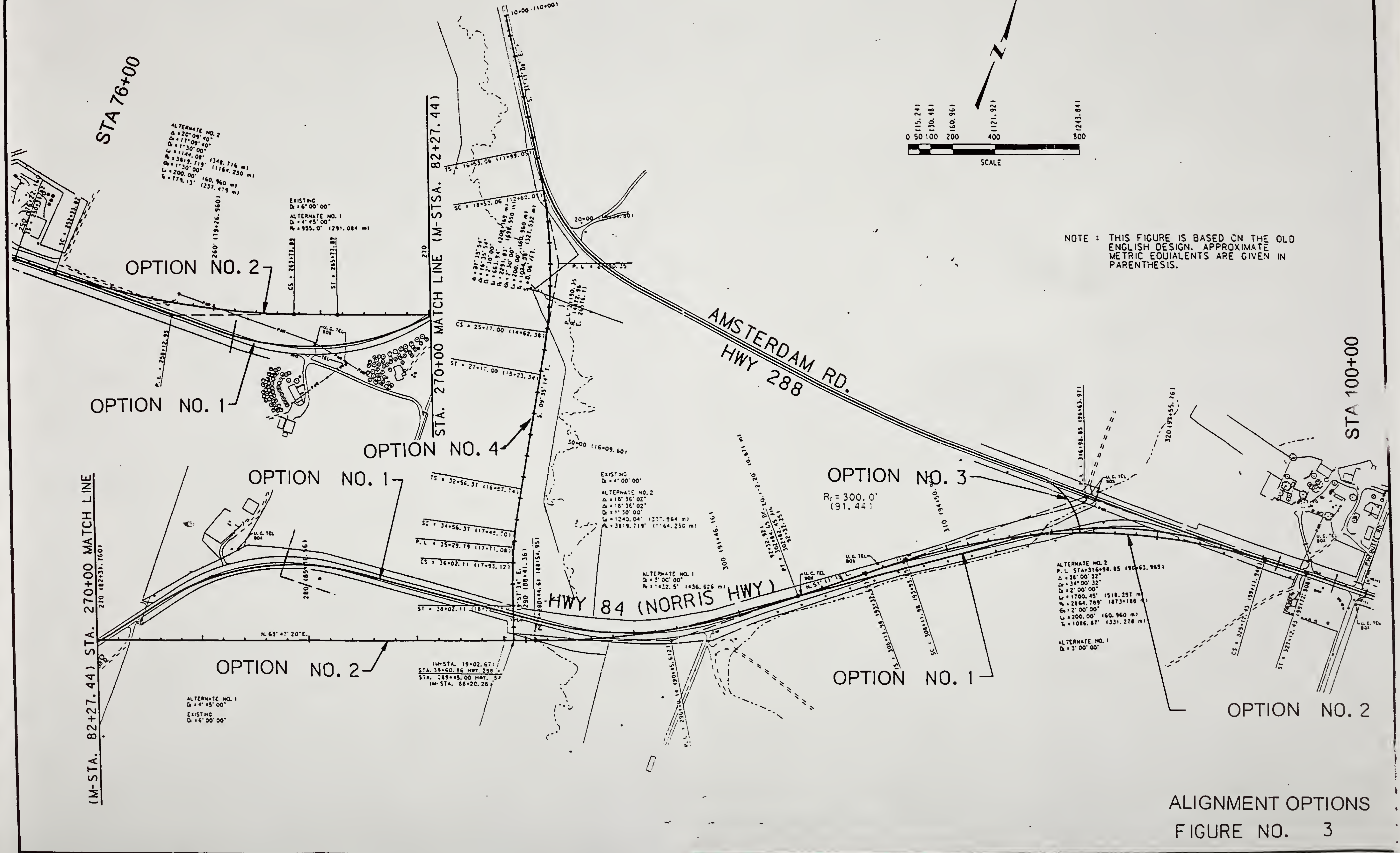
Potential impacts of this alternative on the local environment could be minimized and mitigation procedures could be implemented where necessary. Anticipated impacts would include noise and dust during construction, acquisition of additional right-of-way, minor impacts to wetlands, increased economic development, and continued growth of the project corridor. More specific information on these anticipated impacts is presented in Chapter 3.0.

2.2.3 Conclusion: In order to meet the objectives stated in Chapter 1.0 under "Purpose and Need" and to provide for the most beneficial long-term improvements and anticipated service life, the reconstruction alternative is recommended. The no action alternative offers no improvements over existing conditions, which are already documented to be substandard. Only the reconstruction alternative allows the opportunity to correct the most problems, maximize the safety improvements, and provide long-term benefits.

2.3 SPECIFIC ALIGNMENT OPTIONS

With reconstruction being recommended as the project alternative to be pursued, the next step is to carefully examine the existing alignment and identify areas where improvements are required. The objective of these alternative alignment options is to provide greater safety and improved highway performance by eliminating sharp curvature.

Earlier in this document, some areas of substandard horizontal and vertical alignment were identified. In particular, a short stretch of highway km 39.3 (M.P. 24.4 [Station 76+00 to 100+00]) was singled out as an area where substandard curvature could be improved and one curve could be eliminated altogether by following a new alignment. Also, much discussion has been given concerning relocation and realignment of the Amsterdam Road connection to improve safety. Figure 3 shows the options in this area. The information that follows in this section presents a description of these alternatives. Section 2.4 will then compare and evaluate these alternatives.



NOTE : THIS FIGURE IS BASED ON THE OLD ENGLISH DESIGN. APPROXIMATE METRIC EQUIALENTS ARE GIVEN IN PARENTHESIS.

ALIGNMENT OPTIONS

FIGURE NO. 3

Substandard Curve Alignment Options

2.3.1 Option #1: This option begins at km 39.3 (M.P. 24.4 [Station 76+00]), which is the east end of a long horizontal tangent. From there the alignment would follow the existing as closely as possible, flattening reverse 6° curves to 4°45' and a 4° curve to 3°. This design would meet a 100 km/h (60 mph) design speed but would perpetuate the reverse curves at this location.

It would also require purchase of new right-of-way in order to flatten the substandard curves.

2.3.2 Option #2: This option begins at the same location as option #1. It substitutes a 1°30' curve in place of the first 6° curve, eliminates the second 6° curve altogether by substituting a long horizontal tangent, reduces the 4° curve to 1°30', and replaces a 3° curve at the Amsterdam Road with a 2° curve. As shown in Figure 3, this pulls considerably away from the existing alignment but does allow for a much smoother traffic flow, taking a "kink" out of the highway. A substantial amount of new right-of-way will be required where the long tangent cuts across a cultivated field at metric station 82+27± to approximately 88+20±.

Amsterdam Road Options

2.3.3 Option #3: This is located at km 41.3 (M.P. 25.7 [Station 96+60]) and primarily is developed to improve the connection of Amsterdam Road with Montana Primary Route P-84. Under this option, Amsterdam Road will merely be "button hooked" in a curve right (to the south) to connect with the Highway at a right angle. As shown on Figure 3, the work involved would be a relatively short reconstruction area of Amsterdam Road. Very little right-of-way acquisition would be required.

2.3.4 Option #4: This option would begin approximately 0.8 km (0.5 miles) west along the Amsterdam Road from its present connection with Montana Primary Route P-84. Amsterdam Road turns east at this location. A totally new alignment would be constructed in a southerly direction for a distance of approximately 0.9 km (0.6 miles) until connection with Montana Primary Route P- 84 at Station 88+20.28. This alignment provides for a better angle of intersection and a much greater sight distance in intersecting the two highways and also for eliminating steep grades and a sharp vertical curve in the easterly 0.9 km (0.6 miles) of Amsterdam Road. Substantial new right-of-way for the entire length of the realignment would be required. The existing portion of the Amsterdam Road would be obliterated and smoothed out to blend with the natural terrain.

2.4 EVALUATION OF SPECIFIC ALIGNMENT ALTERNATIVES

The specific alignment options described above will now be evaluated with reference to several important factors and potential impacts. Options #1 and #2 for substandard curve alignments are related and will be compared together as they cover the same stretch of highway between km 39.3 (M.P. 24.4 [Station 76+00 and Station 100+00]). Likewise, Options #3 and #4 for the Amsterdam Road Connection should be compared together as they relate to the realignment and improved safety of the Amsterdam Road connection. Since reconstruction has already been identified as the

preferred alternative for project development, the objective of the following evaluation will be to identify which options at these two locations should be included with the reconstruction project.

2.4.1 Traffic Flow and Safety:

2.4.1.1 Options #1 and #2 for the Substandard Curve Alignment: Each of these two options will allow for widening of the existing roadway which will provide for improved traffic flow and accommodation of future traffic volumes. They will also allow for flatter sideslopes to improve safety aspects associated with roadside hazards.

The primary difference is that option #2 allows for much improved traffic flow with its long tangent, subtle curves and elimination of one curve altogether. Option #1, on the other hand, employs a reverse curve situation at the maximum curvature allowed for the design speed.

2.4.1.2 Option #3 and #4 for the Amsterdam Road Connection: The "button hook" associated with option #3 creates a kink in the Amsterdam Road alignment, which will be disruptive to traffic flow. Option #4 offers a much improved sight distance and straighter alignment allowing the driver to concentrate on the on-coming traffic rather than vehicle maneuvering. The tangent approach is clearly preferable to the short landing area afforded by option #3. Option #4 could have left and right turn bays on Montana Primary Route P-84 at the intersection whereas incorporation of such would be more difficult with option #3 where the primary highway is on a curve at the intersection location.

Eastbound traffic off of Amsterdam Road will be required to travel a slightly longer distance with option #4, approximately 640.0 m (2100.0 ft) or 0.6 km (0.4 miles). However, it is likely the improved safety and efficiency will eliminate the perception of this being a problem.

2.4.2 Horizontal and Vertical Alignment:

2.4.2.1 Option #1 and #2 for the Substandard Curve Alignment: Horizontal alignment was discussed under the traffic flow and safety section. Vertically there is little difference between the two and thus no real means for comparison.

2.4.2.2 Option #3 and #4 for the Amsterdam Road Connection: Option #3 leaves a very steep vertical grade going up and over a ridge just west of the intersection. This grade and associated sharp vertical curvature are already associated with extremely poor sight distance and difficulty in maneuvering in the winter with snow and ice conditions. Option #4 offers complete elimination of this vertical grade problem with a gentle grade out across a relatively flat valley area.

2.4.3 Environmental:

2.4.3.1 Option #1 and #2 for the Substandard Curve Alignment: Both of these options will produce some environmental impacts. Each require taking some existing farm ground out of production, but option #2 will require 1.9 hectares (4.7 acres) of farm ground and option #1 will require 1.1 hectares (2.7 acres) of farm

ground, which is substantially more unless the present traveled way (PTW) is obliterated and reverted back to farm use. Neither will have any anticipated impacts on cultural or historic resources. Option #2 will require 0.03 hectares (0.07 acre) of wetlands where it is pulled away from the existing disturbance at Station 88+50 where the PTW crosses a low lying drainage area.

Neither option will require displacement or relocation. In fact, both pull further away from an existing residence near the west end. In this regard, option #2 pulls slightly further away than option #1.

Both options will have relatively the same disruption, noise, and dust during construction. Option #2 should have slightly less traffic noise since vehicles will not be substantially changing velocity in negotiating the sharper reverse curve area. Similarly, energy consumption will be less on option #2.

2.4.3.2 Option #3 and #4 for the Amsterdam Road Connection: Option #3 would have very little environmental impact as it is located in an area already disturbed by highway facilities. Option #4 would cross a wetland area of 0.02 hectare (0.05 acre) at the north end. Although wildlife (primarily deer) are known to pass through this drainage area, minimal impact for deer habitat is anticipated since the area affords little cover or permanent habitat. The wetland area has been degraded by heavy livestock grazing and trampling therefore serves not so much as habitat as it does for a potential game path. The impact would be a loss of 0.02 hectare (0.05 acre) on the north side of the stream, but sufficient area would remain in the stream bottom to facilitate wildlife movement.

Option #4 will also require taking some farm ground out of production. A way to minimize this would be to keep the proposed alignment along the border between the farm ground and the drainage area. A culvert crossing of the drainage will be required, necessitating mitigation measures to minimize potential siltation during construction.

Option #4 will also require more disruption, noise, and dust during construction than Option #3, but such items would be considered minimal due to the uninhabited nature of the surrounding area. Traffic noise and air pollution would be greater with Option #3 as vehicles must traverse the steep grade spoken of earlier.

2.4.4 Right-of-Way: Options #1 and #2 for the Substandard Curve Alignments, and options #3, and #4 for the Amsterdam Road Connection will require the acquisition of some additional right-of-way. Table 2 shows the additional right-of-way required for the section of project between km 39.3 (M.P. 24.4 [Station 76+00 and Station 100+00]) on Montana Primary Route P-84 for options #1 and #2 (see Figure 3). For option #3, additional right-of-way is given for the 91.0 m (298.6 ft) "button-hook", which connects State Secondary Route S-288 with Montana Primary Route P-84. For option #4 the additional right-of-way required is given for the proposed realignment of State Secondary Route S-288 from Station 12+44 to the intersection with Montana Primary Route P-84 at Station 19+02.

TABLE 2 APPROXIMATE ADDITIONAL RIGHT-OF-WAY REQUIRED						
Options	**Cultivated**		**Natural or Vacant**		**TOTAL**	
	hectares	acres	hectares	acres	hectares	acres
1	7.1	17.5	0.0	0.0	7.1	17.5
2	10.3	25.5	0.4	0.0	10.3	25.5
3	0.4	0.9	0.0	0.4	0.4	0.9
4	1.2	3.0	2.5	6.2	3.7	9.2

2.4.5 Cost: Table 3 presents a cost summary for the section of project between Station 76+00 and Station 100+00 on Montana Primary Route P-84 for options #1 and #2 (see Figure 3). For option #3 the cost is given for the 91.0 m (298.6 ft) "button-hook", which connects State Secondary Route S-288 with Montana Primary Route P-84. For option #4 the cost is given for the proposed realignment of State Secondary Route S- 288 from Station 12+44 to the intersection with Montana Primary Route P-84, Station 19+02.

TABLE 3 ESTIMATED COSTS OF ALTERNATIVE ALIGNMENTS			
Options	**Construction**	**Right-of-Way**	**TOTAL**
1	$ 1,336,000	$ 96,000	$ 1,432,000
2	1,288,000	140,000	1,428,000
3	34,000	5,000	39,000
4	347,000	51,000	398,000

The construction costs are based on a cost of $528,166 per km for options #1 and #2 on the main highway and $372,823 per km for options #3 and #4 on the secondary highway. The right-of-way costs are based on a cost of $13,591 per hectare as indicated by local Realtors.

Due to its longer length, option #1 has a higher construction cost than option #2. Although option #2 requires more construction across undisturbed ground, it is shorter in length than option #1, allowing some relative savings.
Construction costs for option #4 are substantially greater than those for option #3 due to its greater length across undisturbed ground. It also includes a culvert crossing of the drainage area.

The costs for right-of-way acquisition for options #2 and #4 are the greatest, because they require the most land for new construction. The right-of-way acquisition costs include consideration for the cost of both cultivated and vacant or natural property with the combined total value being listed in the table.

A review of the total costs shows option #1 to be slightly more expensive than option #2 and option #4 to be substantially more expensive than option #3. These cost differentials should be compared to other evaluation sections in this Chapter to determine if the larger costs for a given alternative are warranted for the benefits or potential improvement they offer.

2.4.6 Implementation: The primary factors affecting implementation of any of these alternatives are environmental impacts, right-of-way acquisition, and public acceptance.

Environmental impacts associated with this project which include option #1 involve widening the existing road and some minor realignment changes. Option #2 involves significant deviations from the existing alignment as two horizontal curves are eliminated and other curves are flattened. The environmental impacts of option #1 will be quite minimal as the area has already been disturbed by the existing road. The environmental impacts of option #2 will also be minimal provided that the abandoned road is obliterated and is returned to agricultural lands, thus mitigating the negative impacts. For both options, any impacted wetlands will also need to be mitigated.

Environmental impacts for option #4 are greater than those for option #3 by virtue of its requiring undisturbed ground. Proper design and use of best construction practices should keep the impacts to a minimum, resulting in a routine permitting process. Again, this is only if the abandoned roadway and any impacted wetlands are properly mitigated.

All options, #1 and #2 for the substandard curve alignment and #3 and #4 for the Amsterdam Road Connection would require some right-of-way acquisition which by the nature of the process would also create some difficulty in implementation.

As Table 2 indicated, option #2 will require the acquisition of about 47 percent more right-of-way than option #1. However, since in most cases the property owners will be the same, a large difference in the level of effort for both alternatives is not anticipated.

There is a difference however, between options #3 and #4 for the Amsterdam Road Connection. Option #3 requires little right-of-way and option #4 would require a substantial amount where the alignment crosses over presently undeveloped ground. In this aspect, the implementation of option #4 will be more difficult than option #3 by having to go through the right-of-way negotiation process.

Lastly, is public acceptance. Sometimes when new alignments are proposed the needs for such are not readily apparent to the public, leading to some difficulty in getting the proposal implemented. In this case, however, the benefits to accrue from the improved alignment with option #2 for the substandard curve alignment and #4 for the Amsterdam Road Connection are obvious enough that the public is supportive of them. In fact, at the public information meeting held in March 1992 and April 1998, these two proposals were presented to the public on large aerial photograph display boards. Very positive comments were received about the improvements they would offer, and no negative input was given. Where the public is receptive of these two alternates, they would probably be easier to implement than trying to maintain the status quo offered by options #1 and #3.

2.4.7 Conclusion: Each of the options has their particular advantages and disadvantages. Each of the items discussed in the foregoing sections are important in terms of the potential impacts of the project, the long-term performance of the facility, and the ease with which the project may be constructed or implemented.

Option #2 for the alignment and #4 for the Amsterdam Road Connection emerge as the options with the lowest degree of unfavorable consequences, primarily from their ability to meet the objectives of the improvement project, less environmental impact, and the reasonable cost and effort required for implementation. Therefore, these options are MDT's **preferred** options. Options #1 and #3 were considered but not advanced for further consideration in this Environmental Assessment.

The next chapter will evaluate the total overall proposed improvement project and will identify potential impacts, including these preferred alternative options (#2 and #4), with regard to a number of environmental factors.

3.0 AFFECTED ENVIRONMENT AND IMPACTS

3.0 AFFECTED ENVIRONMENT AND IMPACTS

The following sections discuss existing conditions and potential impacts of the proposed project. Where appropriate, mitigative measures are discussed.

3.1 SOCIAL AND ECONOMIC

According to the Gallatin County Clerk, the following is a summary of the population in Gallatin County by race and/or national origin, based on 1990 U.S. Census Data:

Group	Population	
White	49,180	(96.3%)
Black	80	(0.2)
American Indian, Eskimo, or Aleut	608	(1.2)
Asian or Pacific Islander	449	(0.9)
Hispanic Origin	593	(1.2)
Other	146	(0.3)
Total	51,056	(100%)

There are no known communities or concentrations of minorities in the project area.

The improvements primarily involve upgrading the existing facility to provide a wider roadway capable of safely handling projected traffic loads. Existing traffic patterns will not be changed significantly. Any effect that does occur will be beneficial as the new highway will provide a more efficient route for school buses, mail carriers, ambulances, and any other public service vehicles which serve the area. Existing approaches and access will be perpetuated where needed.

Although there may be an influx of workers during construction, there will be minimal strain on available housing. No long-term effects on housing or social patterns in the area are foreseen.

This project will not create disproportionately high and adverse human health or environmental effects on minority and low-income populations **(E.O. 12898)** and complies with the Title VI of the *Civil Rights Act of 1964* **(42 U.S.C. 2000d)**.

Improvement of the highway will facilitate the moving of farm goods to the market place, which should prove beneficial to improved economy. Improved access to the area from the highway improvements will also accommodate growth pressures. However, this growth is already occurring and improvement of the highway will not substantially change the rate of growth.

Total project cost is currently estimated to be $6.0 million including design, construction, utility relocation, and right-of-way acquisition. Funding for the project is being provided by the Montana Department of Transportation, most of which is federal aid.

3.2 PERMITS REQUIRED

The following permits will be acquired prior to any relevant disturbance: (see also the FEMA Floodplain Development Permit, following):

This proposed project will be in compliance with the provisions for both Water Quality under **75-5-401(2) M.C.A.** for *Section 3(a)* authorizations, and Stream Protection under **87-5-501** through **509 M.C.A.**, inclusive.

A ***124 SPA*** *Stream Protection* Permit will be required by the MDFW&P; and

This project will require the following permit under the *Clean Water Act* (**33 U.S.C. 1251-1376**):

A *Section 402*/Montana Pollutant Discharge Elimination System permit from the Montana Department of Environmental Quality's Permitting and Compliance Division.

A *Section 404* permit from the U.S. Army - Corp of Engineers. The CoE will be notified that this proposed project qualifies for a "Nationwide" 404 permit under the provisions of **33 CFR 330**.

All work will also be in accordance with the *Water Quality Act* of 1987 (**P.L. 100-4**) as amended.

Floodplains - A floodplain delineated under Federal Emergency Management Administration (FEMA) criteria along the Gallatin River is encroached by this proposed project. Gallatin County administers this floodplain for FEMA, and a Floodplain Development Permit will be required for this encroachment.

3.3 LAND USE

Land use in the area is predominately agricultural in the portion west of the Gallatin River, with more concentrated residential and light commercial in the area from Four Corners to the River. According to the Gallatin County Planning and Zoning Department, Gallatin County has no comprehensive plan or planning and zoning policy. It relies on an existing subdivision ordinance and Montana Department of Health and Environmental Sciences policies for septic tank permits to help control growth in a given area.

Land use patterns are not expected to be changed by the proposed action. It is likely that improvement to the highway will facilitate continual growth and development near the Four Corners area, including both densifying existing commercial development and attracting new development to presently vacant areas. Present development trends would indicate this development would eventually come to the area regardless of the highway project but may be expedited when the highway is improved. This increase in development is seen as being beneficial to the area economy as discussed in the economic impacts section above.

3.4 AIR QUALITY

The State Air Quality Bureau has stated that, "the temporary nature of this project will not affect the compliance with the federally approved State Implementation Plan (SIP) for the area. Asphalt plants and gravel crushers are required to obtain air quality permits to operate and construction activities are required to use dust suppression in and near residential areas."

Requirements of the Montana Department of Transportation's Standard Specifications for Road and Bridge Construction will be followed to help mitigate dust and other air pollution during construction; otherwise, no long-term negative impacts on air quality are anticipated. Air quality impacts after construction will consist mainly of exhaust emissions from motor vehicles, which will increase on this route as traffic volumes increase. Traffic volumes will increase regardless of the new construction. Reduced emissions from the improved traffic flow provided by this project will tend to offset the potential increase in exhaust emissions, which would therefore have a long-term beneficial effect on air quality.

Air Quality - This proposed project is located in an “unclassifiable” attainment area of Montana for air quality under 40 CFR 81.327, as amended. As such, this proposed project is not covered under the U.S. Environmental Protection Agency’s Final Rule of November 24, 1993 on Air Quality conformity. Therefore, this proposed project complies with Section 176(c) of the *Clean Air Act* as amended (**42 U.S.C. 7521(a)**).

3.5 NOISE

Traffic noise will increase as traffic volumes increase. However, traffic is expected to increase on this roadway whether or not the proposed project is constructed. The improved alignment and grade will tend to reduce noise in some areas and, therefore, offset noise from the traffic increase. The new alignment associated with Alternate #2 would move the roadway further away from two farm residences decreasing there noise impacts and, since no other receptors exist, no new noise impacts would result. Noise level increases due to the construction of this project will be temporary. Restrictions on hours of construction operation will be employed to help mitigate this impact.

Except for five or six smaller structures, some of which are farm buildings, most structures on the project are 30.5 m (100.0 ft) or more from centerline. Using MDT’s noise prediction nomographs, the noise level at the right-of-way line would be less than 70 dBA, which is the acceptable level for these areas. Therefore, noise abatement procedures will not be necessary. A MDT memo, dated March 18, 1992, from the Environmental and Hazardous Waste Bureau to the MDT Consultant Design Engineer substantiated this by stating "Noise level increases resulting from construction of these projects will be insignificant." The following leq(h) dBA levels were calculated:

Distance from Centerline	Present Year (1991)	Design Year (2015)
22.9 m / 75.0 ft	59 dBA	62 dBA
45.7 m / 150.0 ft	55 dBA	58 dBA
91.4 m / 300.0 ft	50 dBA	53 dBA

Design year noise levels will not exceed the Noise Abatement Criteria of 67 dBA for Activity Category B (schools, residences, churches, etc.) at potentially sensitive receivers.

No computer modeling was performed for modeling noise levels.

3.6 ENERGY

The proposed facility will include flatter horizontal curves and vertical grades. Vehicles will not be required to decelerate then accelerate to negotiate horizontal curves, and access to adjacent properties and passing will become easier and more efficient with the wider road and turning lanes at Amsterdam Road. The project is, therefore, expected to increase vehicle operating efficiency and, thereby, save fuel and decrease wear on vehicles.

Energy consumption will occur during construction activities, but no other short or long-term effects on energy are foreseen.

3.7 FLOODPLAINS AND DRAINAGE

The project follows a rolling terrain with numerous drainage areas and irrigation facilities. The project crosses major drainages (greater than one square mile), but all have their flow intercepted and carried in irrigation canals except for the Gallatin River. The associated floodplain is delineated by FEMA and regulated by Gallatin County. The existing bridge crossing (Shedd's Bridge) of the Gallatin River will be utilized as a part of this project. Eastward from that location the new highway alignment and elevation will very closely match the existing. Therefore, no adverse impacts on the Gallatin River Floodplain are anticipated. A floodplain delineated under Federal Emergency Management Administration (FEMA) criteria along the Gallatin River is encroached by this proposed project. Gallatin County administers this floodplain for FEMA, and a Floodplain Development Permit will be required for this encroachment

Runoff from other drainage areas is primarily associated with snowmelt in the spring of each year, and provision for adequate culvert sizing to minimize flooding potential has been made in a formal study. Crossings will be designed in accordance with requirements of the Hydraulics Manual prepared by the Montana Department of Transportation. Existing culverts throughout the project will be replaced (enlarged where required), and new culverts will be installed where necessary. Presently, there does not appear to be a need for any drainage easements.

The floodplain encroachments from this proposed project occur at approximately km 17.3 (M.P. 27.8). This proposed project will not promote or encourage development within this delineated floodplain, nor increase flood liability hazards from its construction. This proposed project is therefore considered to be in compliance with E.O. #11988.

3.8 IRRIGATION FACILITIES

Numerous irrigation facilities cross the highway throughout the project. Several of these are major irrigation canals carrying appreciable flow through box culverts or large diameter metal pipe culverts. Major irrigation crossings are listed in Table 4.

TABLE 4 MAJOR IRRIGATION CROSSINGS	
Station	**Irrigation Facility**
72+01	Highline Canal
124+04	Lowline Canal
124+84	Kughen Ditch
135+94	Spain Ferris Ditch
144+87	Beck and Border Ditch

A study of the anticipated flow for these irrigation facilities has been made in the hydraulic study mentioned in the previous paragraph. All irrigation crossings will similarly be designed to current hydraulic requirements from MDT. It is anticipated the existing irrigation culverts will be replaced. Coordination with the irrigation companies will be required to accomplish this during the non-irrigation season to mitigate potential adverse impacts to irrigation. Otherwise, with the improved crossings, no adverse impacts to irrigation facilities are anticipated.

The existing bridge crossing the Spain Ferris Ditch will be replaced as a part of this project. Hopefully, the crossing can be accommodated in a large box culvert; if not, then a new bridge structure would be constructed.

3.9 WATER QUALITY

Water quality and use will be protected through the issuance of water quality permits as discussed in Section 3.2.

Short-term construction related water quality impacts may be expected, and mitigative measures such as erosion control, settling basins, silt fences, etc., will be taken to ensure that any impacts will be kept to a minimum. Assuming that new drainage facilities are designed and constructed in accordance with current regulations and best construction practices, no adverse impact on water quality is expected.

3.10 WETLANDS

A wetlands assessment report dated March, 1992, was performed in accordance with the evaluation process developed by the Montana Department of Transportation; the Montana Department of Fish, Wildlife, and Parks; and the Army Corps of Engineers Wetland Manual. Executive Order 11990, "Protection of Wetlands," established a national policy to avoid, to the extent possible, the long and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

A wetlands survey was conducted along this highway corridor in order to identify wetlands that might be impacted by the proposed project. Approximate limits of the wetland areas delineated by the survey are shown on Figure 4a and 4b. Table 5 summarizes the wetlands survey and map. Areas

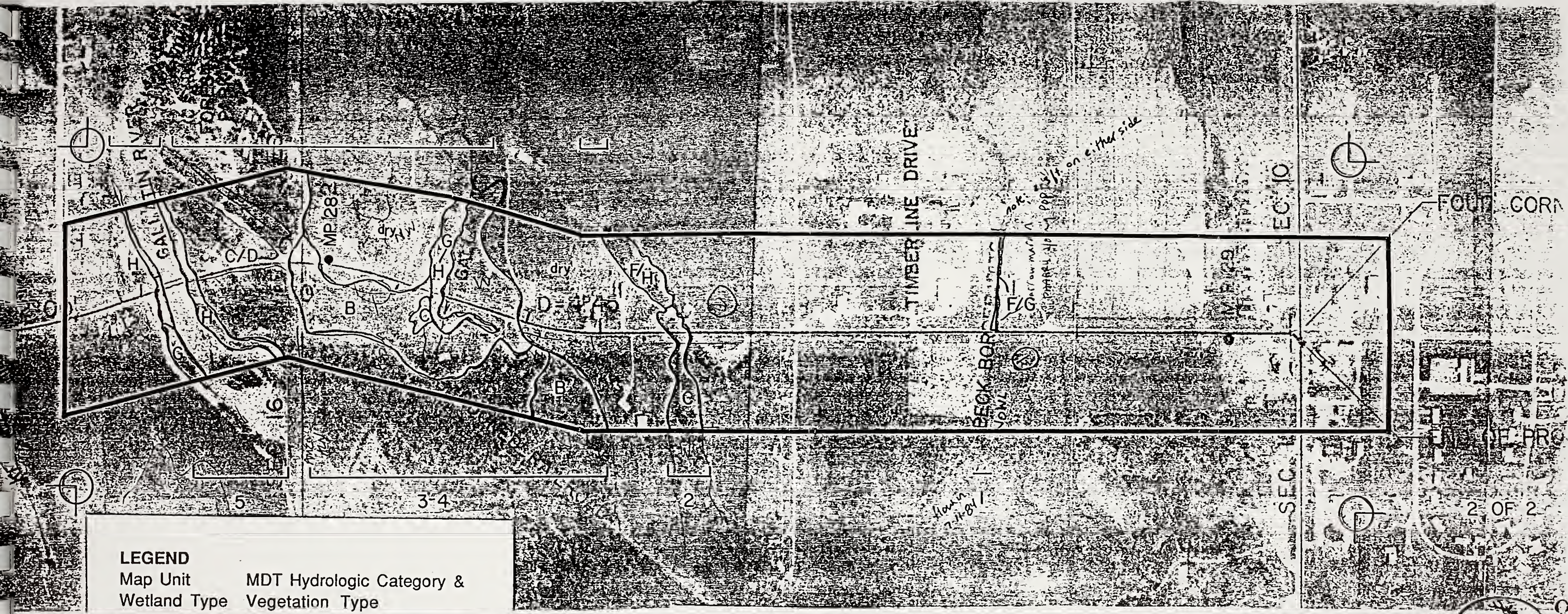
disturbed are associated with implementation of the preferred alternative. The complete assessment report identifying the wetland area and its characteristics is available for inspection or copying at MDT offices in Helena or Butte.

TABLE 5
POTENTIAL AFFECTED AREAS OF WETLANDS

Summary By Site	Wetland Category	Map Code	Station	Areas in Corridor		Areas Disturbed	
				hectares	acres	hectares	acres
1	IIIA/IIIB	F/G	144+87	2.1	0.1	0.0	0.0
	subtotal			**2.1**	**0.1**	**0.0**	**0.0**
2	IIB	C	139+88	0.[illegible]	1.3	0.[illegible]	0.2
	IIIA/IIIB	F/G		0.[illegible]	1.1	0.0	0.0
	subtotal			**[illegible].0**	**2.4**	**0.[illegible]**	**0.2**
3-4	IIIB/IIIC	G/H	131+65	0.7	1.7	0.0	0.1
	IIA	B	to	5.0	12.3	0.3	0.8
	IIB/IIC	C/D	137+44	12.1	29.8	0.5	1.1
	IIB	C		0.3	0.7	0.0	0.0
	subtotal			**18.1**	**44.5**	**0.8**	**2.0**
5	IIIC	H	131+00	1.2	3.0	0.1	0.1
	IIIB	G	to	0.4	1.1	0.0	0.0
	IIID	I	131+65	0.4	0.9	0.0	0.1
	subtotal			**2.0**	**5.0**	**0.1**	**0.2**
6	IB/IIA	A/B	88+99	0.0	0.1	0.0	0.1
	IIA	B		[illegible].0	2.4	0.0	0.0
	subtotal			**[illegible].0**	**2.5**	**0.0**	**0.1**
7	IIA	B	73+76	2.1	5.2	0.2	0.5
	subtotal			**2.1**	**5.2**	0.2	**0.5**
SUMMARY OF WETLAND CATEGORY	IB/IIA			0.0	0.1	0.0	0.1
	IIA			8.1	19.9	0.5	1.3
	IIB			0.8	2.1	0.1	0.2
	IIIB			0.4	1.1	0.0	0.0
	IIIC			1.2	3.0	0.0	0.1
	IIID			0.4	0.9	0.0	0.1
	IIB/IIC			12.1	29.8	0.4	1.1
	IIIA/IIIB			0.5	1.3	0.0	0.0
	IIIB/IIIC			0.7	1.7	0.0	0.1
			TOTALS	**24.2**	**59.9**	**1.0**	**3.0**

* Classification after Montana Interagency Wetlands Group (1988)
** Map Code corresponds to wetland type as used in the wetlands report

The study identified approximately 24.2 hectares (59.9 acres) of wetlands within the project corridor. The project corridor is a strip of land much wider than the actual highway which includes all the surrounding land that is related to or serviced by the highway. Construction of the preferred reconstruction alternative, and its associated alignment changes (options #2 and #4) would result in disturbance of 1.0 hectares (3.0 acres) of the 24.2 hectares (59.9 acres) identified.



LEGEND

Map Unit Wetland Type	MDT Hydrologic Category & Vegetation Type
WT B	IIA (sedge)
WT C	IIB (shrub)
WT D	IIC (forested)
WT E	IID (disturbed, unvegetated) unmappable inclusions in other units
WT F	IIA (herbaceous)
WT G	IIIB (shrub)
WT H	IIIC (forested)
WT I	IIIB (disturbed, unvegetated)

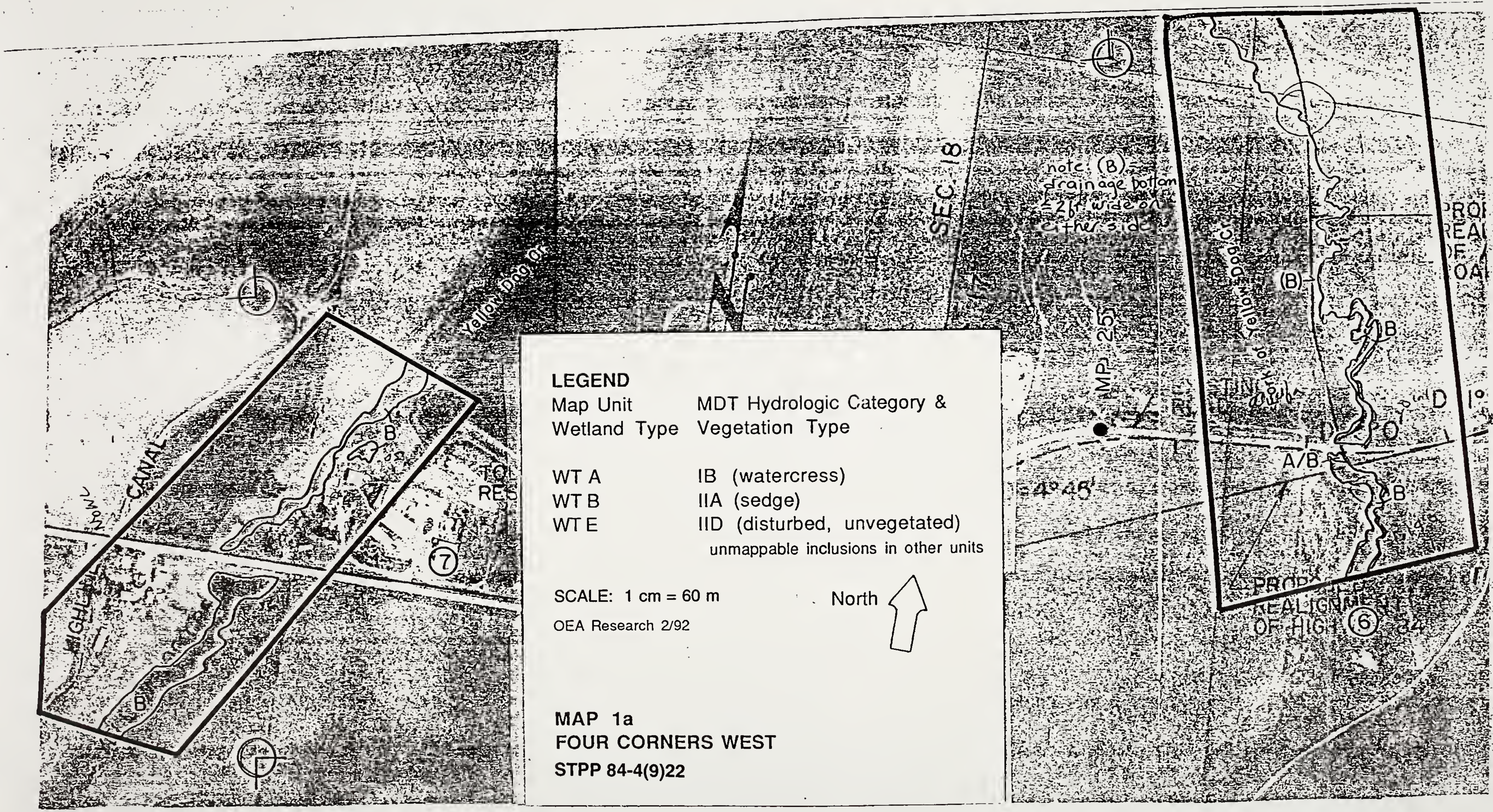
SCALE: 1 cm = 60 m

North

OEA Research 2/92

MAP 1b
FOUR CORNERS WEST
STPP 84-4(9)22

FIGURE 4a



LEGEND

Map Unit Wetland Type	MDT Hydrologic Category & Vegetation Type
WT A	IB (watercress)
WT B	IIA (sedge)
WT E	IID (disturbed, unvegetated) unmappable inclusions in other units

SCALE: 1 cm = 60 m

North

OEA Research 2/92

MAP 1a
FOUR CORNERS WEST
STPP 84-4(9)22

FIGURE 4b

There were seven specific sites identified where wetlands occur. The study identified the value of these sites as generally low, either due to grazing impacts or the smaller or "strip - like" nature of the wetlands. Accordingly, the report concluded that the losses to wetlands required for construction of the project would have little or no impact on the functions and values provided by the wetlands.

Mitigation for this project is proposed at an MDT owned property site on the east edge of Bozeman. The wetland acreage is being developed by Rajah and Associates. Attached in Appendix B is a letter from the Corps of Engineers dated December 13, 1996. If mitigation at this site is not possible, then the impacts will be mitigated with the available credits at the Beaverhead ranch property northeast of Dillon.

Noxious weed control will also be necessary, and, therefore, revegetation, seeding, and fertilizing will need to be coordinated with the Gallatin County Weed District in accordance with standard procedures and practice.

3.11 HISTORICAL/CULTURAL/ARCHAEOLOGICAL RESOURCES

A cultural resource inventory report was performed in May, 1992, and is available for review at the MDT offices in Helena or Butte. This report was conducted in accordance with MDT policy and consisted of both file/records search and field survey. A search of the statewide archeological site files that are maintained by the Montana State Historic Presentation Office (SHPO) in Helena was completed. The State Archeologist Office was contacted in order to identify sites of concern, if any. In addition, local testimony contacts were completed and evaluated for reporting purposes. Table 6 is a brief summary of eligible sites identified and a statement of impact.

TABLE 6
PROPERTIES ELIGIBLE FOR
NATIONAL REGISTER OF HISTORIC PLACES

Site No.	Identification	Impact
24GA810	Pine Butte School	None

Only one site was considered eligible for inclusion in the National Register of Historic Places. This site was the Pine Butte School. The Pine Butte School was constructed in 1887 and is unique for its architecture and representation of the period.

Fortunately, the proposed Highway improvements do not impact this site. The report concludes that no other impacts to any historical, cultural, or archaeological resources are foreseen for this project.

Concurrences from the Advisory Council on Historic Preservation on March 23, 1994, and the State Historic Preservation Office on February 15, 1994, can be found in Appendix C.

The roadway will follow existing disturbances through much of the project corridor, and, thus, the potential for additional archaeological finding is minimal. The construction specifications will,

however, contain a clause that if resources are found during construction then work must cease until the sites are properly evaluated.

3.12 FISH, WILDLIFE, AND THREATENED OR ENDANGERED SPECIES

A Biological and Sensitive Species Report was completed for this project by a consultant in October 1992, and is available for copy and review at the MDT offices in Helena and Butte. This report described the wildlife, fisheries, and plants possibly occurring within the project area (within a 32.2 km (20.0 mile) radius of the project).

Wildlife found in the area includes mule and white-tailed deer, elk, moose, big horn sheep, mountain goat, black bear, and mountain lion. Other wildlife includes ducks, grouse, raptors, beaver, bobcat, coyote, raccoon, and various non-game animals. Species of special concern which could possibly be found near the project area based on habitat requirements are the skunk, shrew and myotis bat.

The Gallatin River supports brown trout, mountain whitefish, and occasionally rainbow and brook trout. The Montana Natural Heritage Program lists the Yellowstone Cutthroat trout and Montana arctic grayling as species of special concern in Gallatin County. There are records of grayling in Hyalite Creek, a tributary to the East Fork of the Gallatin River. There are also records of Yellowstone cutthroat in tributaries to the Gallatin River upstream of the project area.

Farm crops include grains, alfalfa, and pasture. Native plant life includes grasses, sagebrush, bromes, and mountain juniper. There were twenty-nine plant species of special concern designated by the Montana Natural Heritage Program in Gallatin County but none of these species are known to occur within the project vicinity.

A biological assessment was also completed for this project by a consultant in October 1992, and is available for review at the MDT offices in Helena and Butte. The Montana Department of Fish, Wildlife, and Parks (MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS) and the U.S. Fish & Wildlife Service were consulted to determine the nature of fish and wildlife resources in the project area.

Response from the US Fish and Wildlife Service indicates that no substantive issues with the proposed project are foreseen, provided care is taken not to impact any threatened or endangered species in the area.

Threatened and endangered species of concern to the USFWS in this area are the bald eagle (Haliaeetus leucocephalus) and the peregrine falcon (Falco peregrinus). The bald eagles' nesting activities seem to be increasing in this area of the State. Bald eagles and peregrine falcons probably occur in the immediate project location as seasonal migrants. Based on the biologists report and the response received from the USFWS, no adverse impacts to threatened and endangered species in the area are foreseen, and no further study is planned.

The letter from the USFWS also refers to possible raptor (birds of prey) activity in the area. Current policy is to include raptor proofing on any power lines of concern that are relocated or improved as a part of the project. Since raptors are known to exist in the area and since this project will include the relocation of power poles, the utility company controlling the power line will "raptor-proof" any power poles of concern that are to be relocated as a result of this project. Power lines of concern are those that carry between 12,000 and 69,000 volts and have a separation of less than 152 cm

(60 in) between conductors. Upon request by the utility company, the MDT Environmental Division will provide the necessary information and instruction for raptor-proofing the power lines.

3.13 PRIME AND UNIQUE AGRICULTURAL LANDS

This proposed project will impact 10.0 hectares (24.8 acres) of land designated as prime farmland by the U.S. Department of Agriculture's Soil Conservation Service (SCS). (Although an "Important Farmlands" map of Gallatin County has not been published, the Bozeman SCS office for Gallatin County was requested to identify Prime/Unique Farmland, or Farmlands of Statewide/Local Importance being affected by this proposed project.) A Farmland conversion Impact Rating form (#AD-1006) was completed for this proposed project in accordance with the Farmland Protection Policy Act (FPPA - **7 U.S.C. 4201**, et seq.). The *Total Points* for this proposed project's Site Assessment Criteria are less than 160. Therefore, under 7 CFR 658.4(c) no additional consideration for protection is necessary. A copy of this form is attached along with a copy of the letter from the Bozeman SCS office in Appendix B.

Farmland that is considered prime for this proposed project does not have slopes exceeding four percent and is irrigated. Agricultural activities in the project area include grazing and grain and hay production. A letter from the Soil Conservation Service indicated that "The project should not have a major effect on this area as long as good, accepted construction practices are followed and all disturbed areas are seeded to permanent vegetative cover."

The proposed alignment will predominately follow the existing alignment except for the section of main highway between Station 76+00 and Station 100+00 and the Amsterdam Road realignment. For these areas, some cultivated and undeveloped land will be required for additional right-of-way. Otherwise, additional required right-of-way will only include narrow strips of land adjacent to the existing right-of-way. Negative impacts on prime and unique agricultural lands will be very minimal, especially if in the areas of horizontal realignment the abandoned road is obliterated and returned to agricultural land, thus mitigating the impact.

3.14 RIGHT-OF-WAY

Existing right-of-way widths vary significantly throughout the project from as little as 30.5 m (100.0 ft) to as much as 61.0 m (200.0 ft). A determined effort will be made during the design of this project to reduce right-of-way impacts to a minimum. Wherever possible, existing right-of-way limits will be used. In other areas, only that amount needed to properly construct the sideslopes and cut/fill areas will be acquired. Construction permits may be used to minimize permanent right-of-way needs. It is currently anticipated that approximately 31.7 hectares (78.3 acres) of new right-of-way, 1.5 hectares (3.7 acres) in construction permits and 0.2 hectares (0.5 acres) in easement area will be required for this project.

MDT 's guidelines for "minor amounts" of Right-of-Way (including Construction Permits) are limited to either 10% of a parcel under 10.0 hectares (25.0 acres) or 1% of a parcel equal to or greater than 10.0 hectares (25.0 acres) in size. This project will have more than minor amounts of Right-of-Way on 7 parcels of 10.0 hectares (25 acres) or less and 12 parcels greater than 10.0 hectares (25 acres). Of the 7 parcels, 4 have established buildings (one is the Pine Butte School)or residences which are close to the new Right-of-Way. Of the 12 parcels which are greater than 10.0 hectares

(25 acres), 5 have established buildings or residences which are close to the new Right-of-Way.

There will be one relocation of a trailer house on this project at km 39.1 (M.P. 24.3 [Station 74+60]).

The new Right-of-Way in these areas is necessary for the construction of this proposed project in order to update the roadway to current standards to overcome narrow width, steep shoulders, sharp curves, and steep grades.

The developed nature of this project dictates that limited access control will be acquired as a part of the project development. Under this condition, existing approaches would be perpetuated as necessary, but new approaches could only be obtained from a permit from MDT. This, in itself, creates somewhat of a limit on development and assures that the new facility does not become congested by turning movements associated with an excessive number of approaches.

3.15 CONSTRUCTION

Construction related activities will result in some short-term adverse impacts or increase air pollution which cannot be avoided. These impacts include:

- Emissions from asphalt plants and crushers;
- Dust from construction equipment activities;
- Increased noise levels from construction equipment;
- Potential for erosion from fresh cut and fill slopes;
- Increase in water turbidity in streams from construction activities; and
- Inconvenience to highway users resulting from delays, detours, and temporary surfacing.

The Contractor will be required to adhere to all federal, state, and local regulations to minimize any pollution. These impacts will be minimized to the extent practical through proper construction practices. Dust will be controlled by watering and/or other acceptable methods. Temporary erosion control measures will be used where construction activities are immediately adjacent to a river or stream. Construction related erosion will be controlled, and slopes will be re-vegetated as soon as possible. Air quality permits will be obtained from the State Air Quality Bureau for asphalt plants and crushers.

Traffic will be maintained through the project during construction. Flagging and single lane traffic may be required at times. A traffic control plan will be developed to minimize inconvenience to motorists, local residents, and businesses.

There are numerous utilities that either cross or run adjacent to the new alignment and will require relocation. Arrangements will be made to have all conflicting public utilities moved prior to the start of construction on the project. Although there may be some short-term disruptions in service, all necessary utilities will be perpetuated.

Gravel and borrow sources for base and surfacing aggregates have not yet been defined. There are several commercial aggregate sources available for use in the area. Borrow material removal from gravel pits will be subject to applicable rules and regulations of the Montana Open Cut Mining Act which will require a reclamation plan.

Overall, impacts from construction are anticipated to be short-term in nature and not significant.

3.16 PEDESTRIANS AND BICYCLISTS

This project is being designed in accordance with the MDT Route Segment Plan, which specifies a minimum 8.6 m (28.2 ft) wide pavement. An increasing number of bicyclists and pedestrians are frequenting the area for touring, recreational, and commuting opportunities as indicated by a letter in Appendix B, from the Monforton School Principal . In order to help accommodate these bicyclists, the traffic lanes will be a minimum of 3.6 m (11.8 ft) wide, and shoulder widths will be a minimum of 1.2 m (3.9 ft) which will be an improvement over present conditions.

A separate bicycle/pedestrian path will be constructed in the area between Four Corners and the Gallatin River on the South side of the road to facilitate bicycle and pedestrian movement and safety. Curb, gutter or sidewalk are not being proposed anywhere on the project.

3.17 VISUAL

Since the project involves widening and improving an existing roadway, effects on the visual environment are not expected to be significant.

The view of the roadway will improve since the widened roadway will be constructed with clean lines and smooth and rounded cut and fill slopes. Disturbed slopes will be re-vegetated. The construction of the project will not substantially change the view from the roadway.

3.18 PARKS AND RECREATION

There are two areas associated with this topic that will be affected by the proposed construction. The first is a fishing access site on the old railroad right-of-way km 44.9 (M.P. 27.9 (Station 130+86)) in the Gallatin River bottom. This right-of-way was purchased by the Montana Department of Fish, Wildlife, and Parks using land and water conservation funds to perpetuate fisherman's access to the Gallatin River. Some additional right-of-way will be required at this location, a 4(f) and 6(f) determination will be required to consider the potential impacts on the recreation area and provide the proper mitigation. Other than the right-of-way acquisition, the grade of the new roadway will be designed consistent to continue the use of this access for recreation. Section 3.19 describes in detail the expected impacts on the 4(f) and 6(f) properties.

The second is a privately owned golf course in the area between km 43.9 (M.P. 27.3 (Station 121+31) and 27.8 (Station 129+39). There is a major primary powerline on the south side of the Highway at this location which will be moved approximately 10 meters (33 feet) to the south by Montana Power Company. This will allow the roadway to be shifted to the south to minimize impacts to the golf course. Using steeper sideslopes to the roadway (out beyond the clear zone area) is also a recommended procedure to reduce impacts to the golf course. Currently, it appears new construction and required right-of-way can be accommodated without significant impacts to this facility. Due to it being privately owned, a 4(f) determination is not required at this location.

Concerning National Forest lands, a letter from the US Forest Service in Appendix B states that "there are no National Forest lands adjoining the project which may be classified as Section 4(f) lands".

3.19 SECTION 4(f) AND 6(f) PROPERTIES

Section 4(f) of the U.S. Department of Transportation act (49 U.S.C. 303) as amended states (in part) that:

> *"The"* (Federal Highway) *"Administration may not approve the use of land from a significantly publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:*
>
> *(i) There is no feasible and prudent alternative to the use of land from the property; and*
>
> *(ii) The action includes all possible planning to minimize harm to the property resulting from such use."*

The Land and Water Conservation Fund (L&WCF) is administered by the National Park Service and Section 6(f) was enacted to ensure that property acquired or developed with L&WCF assistance is retained and used for public outdoor recreation use. This section states that:

> *"No property acquired or developed with assistance under this section shall, without the approval of the Secretary (of the Interior), be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location."*

There are two properties on this project that qualify for Section 4(f) consideration.

The Pine Butte School is a historic site that is eligible for inclusion in the National Register of Historic Places. This school was constructed in 1887 and is unique for its architecture and representation of the period. The proposed project will have no impact on this site.

A "Nationwide" Section 4(f) Evaluation for Minor Impacts on Historic Sites for the Pine Butte School has been completed and can be found in Appendix C.

The second site to be considered for 4(f) involvement is known locally as the Shedd's Bridge Fishing Access, which is considered to be a Section 4(f) property. This site is an old Milwaukee Railroad bed, owned by the Montana Department of Fish, Wildlife and Parks, (MFWP), that runs generally north and south on the east side of the Gallatin River (see Figure 5). The access is approximately 61.0 m (200.0 ft) wide and 426.7 m (1400.0 ft) long. The MFWP maintains this property as a Sportsman's Access. This property was acquired with land, water and conservation funds for wildlife enhancement and local recreation opportunities. Therefore, this site also has a 6(f) classification.

The proposed acquisition from this 4(f)/6(f) site will include approximately 0.2 ha (0.6 acres) of land from the MFWP to allow for the new 54.9 m (180.0 ft) right-of-way. (A completed 4(f) evaluation form is located in Appendix C.) This area is cross hatched on the attached map (Figure 5). The proposed highway alignment will not be altered in this area in order to:

1) Minimize the impacts (acquisition) on State owned land.

2) Minimize the impacts on the existing Gallatin River Bridge. This Bridge was built in 1987 to AASHTO Standards and alterations are not necessary and would prove to be costly.

3) Improve traffic operations and flow.

4) Improve safety of the highway as per Federal and State Standards.

The 0.6 acres of land being used for new highway right-of-way requires a "minor" amount ($0.6 \div 6.5 = 10\% \leq 10\%$) of the Section 4(f) lands.

A letter received from Montana Fish Wildlife & Parks dated August 3, 1998, indicates that no additional mitigation for this 4(f) site is required. This letter is attached and can be found in Appendix B.

The following are the alternatives that have been considered:

1) Do Nothing: Montana Primary Route P-84 must be improved to current Federal and State requirements. These requirements force a widening of the right-of-way. Thus, if the State of Montana Department of Transportation (MDT) wishes to improve Montana Primary Route P-84 to current standards, the do nothing alternative is not feasible and/or prudent.

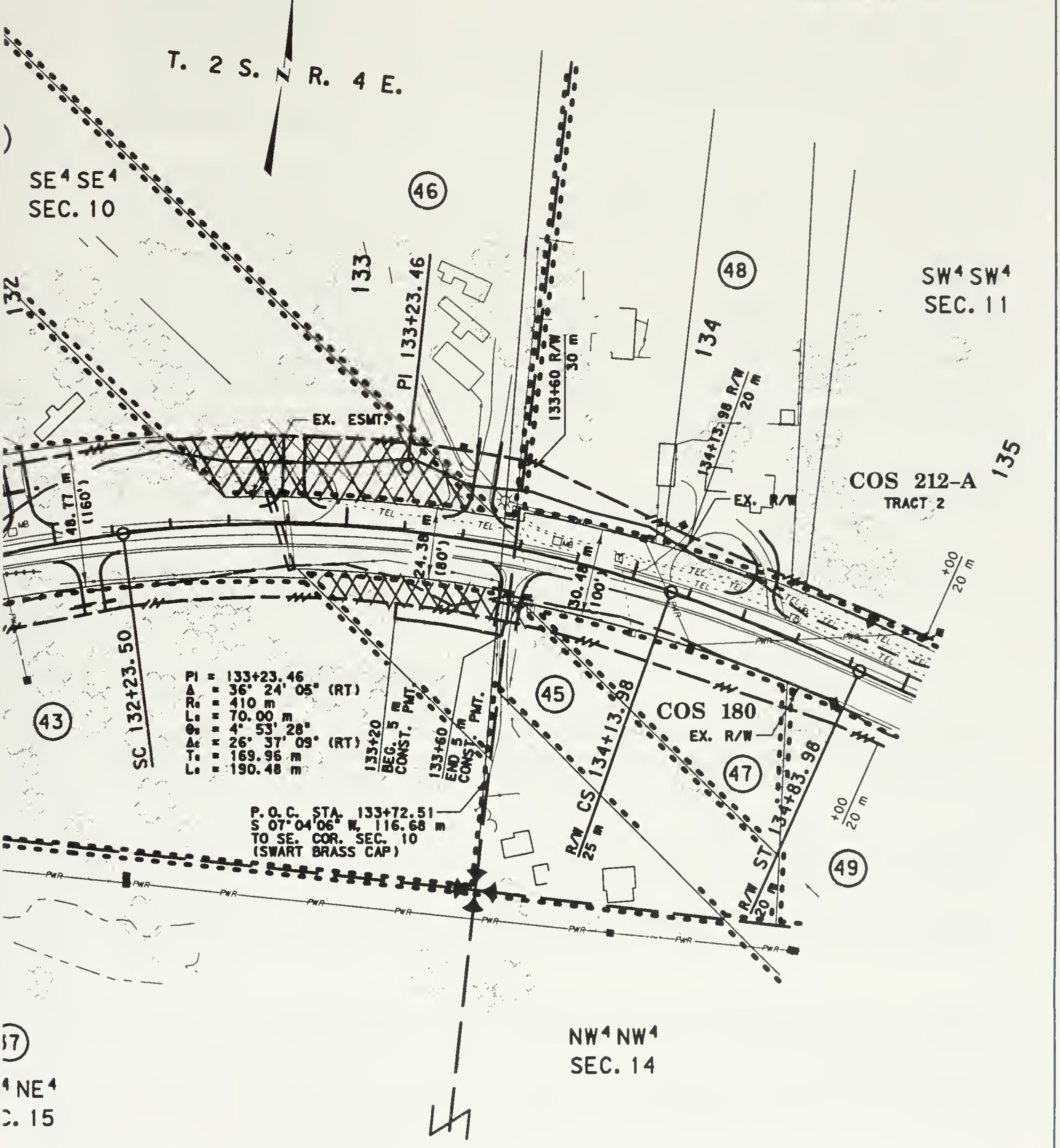
2) Improvements Without Acquiring Land: The Section 4(f) lands are essentially perpendicular to the Montana Primary Route P-84 corridor. The only way to improve Montana Primary Route P-84 without acquiring any 4(f) land would be to build retaining walls and guardrails on the current right-of-way lines. This plan would not allow for proper clear zones, increasing safety hazards, and causing an increased cost to the project in excess of $200,000. This type of retaining wall and guardrail plan would also greatly impede vehicle access to the Sportsman's Access, which access is part of the proposed mitigation. This alternative therefore, is not prudent nor feasible.

3) New Location Avoiding 4(f) Land: The Gallatin River Bridge will be used for the Four Corners West Project. This bridge was replaced and built to State and Federal Standards in 1987. The 4(f) lands are perpendicular to the Montana Primary Route P-84 corridor and extend to the Gallatin River. In order to avoid the 4(f) land, the entire Highway would need

STATE	RIGHT OF WAY ID.	SHEET NO.	TOTAL SHEETS
MONTANA	STPP 84-4(7)22	19	23

PROJECT NO. 1831-007

FOUR CORNERS - WEST



PRELIMINARY

BACKSLOPE LIMITS INCLUDE ROUNDING
CONSTRUCTION LIMITS: CUT SECTION TOP OF CUT
TOE OF FILL

FHWA/DOT APPROVAL

MAP REVISED

MONTANA
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLAN
GALLATIN COUNTY

SCALE: 0m 20m 40m

NOTES: 1. ALL MEASUREMENTS ARE METRIC EXCEPT AS NOTED

2. THE PROPOSED R/W LINE WHERE A SPIRAL CURVE TRANSITION IS USED IS A CHORD RATHER THAN A CONCENTRIC CURVE.

FIGURE 5

6(f) Mitigation Plan: As mitigation for using Section 6(f) from the Gallatin River FAS, MDT must provide replacement land of reasonably equivalent usefulness and location and of at least comparable value. This proposed project as well as MDT's proposed Silver Star North & South, Southeast of Ennis, Big Hole River - West of Melrose, and Riceville Hill projects will cause minor impacts at other MDFWP fishing access or recreational sites acquired or developed with Section 6(f) funds.

The area of impact at each of these sites is minor, typically 0.2 hectares (0.5 acres) or less. Finding and acquiring small replacement areas in the vicinity of each impacted 6(f) site may be difficult and such areas may be of limited usefulness to the MDFWP. Therefore, MDT, in conjunction with MDFW&P, is pursuing purchase of a 11.7 hectare (29.0 acre) parcel of replacement land adjacent to Lewis and Clark Caverns in Jefferson County for a new fishing access or recreational site. This purchase would be used to mitigate the impacts of MDT highway projects on the Gallatin River FAS and the other affected 6(f) sites identified above. This proposed mitigation has been discussed with the MDFWP and is acceptable to the agency. Attached in Appendix B is correspondence with MDFW&P dated April 15, 1998, April 27, 1998, and August 3, 1998. The letter dated August 3, 1998, states that the Lewis & Clark Caverns State Park is probably sufficient mitigation for the proposed project.

As a first step in implementing this mitigation, MDT has appraised the 6(f) lands impacted by the highway projects and established reasonable values for each property.

The appraised value of impacted lands at 6(f) sites and this environmental document will be submitted to the MDFWP for review and acceptance.

3.20 HAZARDOUS WASTE POTENTIAL

A field survey of the project corridor has indicated there is potential for hazardous wastes at a gas station adjacent to the highway at the Four Corners intersection. The gas station should not present a hazard since the project stops 235.0 m (771.0 feet) short of the Four Corners Intersection.

According to MDT Initial Site Assessment dated April 1, 1998, there is the potential of encountering contaminated soil at Station 93+60. This is the location of a septic tank and drain field. If the septic tank and drain field are to be replaced or removed, or impacted by construction, the contents of the tank must be removed by a licensed septic tank cleaner in accordance with Title 37 Chapter 41 MCA & ARM 17.50.800-17.50.810. If the drain field soil is not contaminated with hazardous waste it can be left in place.

There also may be potential for hazardous waste associated with buried heating oil tanks that may exist within the new Right-of-Way. The Department of Environmental Quality no longer regulates or requires registration of farm or residential underground storage tanks used for the storage of heating oil that have a capacity of 1,100 gallons or less. The potential is small but it does exist for these types of tanks to be encountered during construction. Standard procedures need to be followed if these types of tanks are encountered.

3.21 NATURAL RESOURCES

Mineral aggregates and bituminous materials will be required for construction of the proposed improvements. Fortunately, the area has numerous alluvial deposits of mineral aggregates that can be effectively utilized for highway construction. Materials produced by excavation required for construction can also be re-used in embankment and fill areas to maximize the use of existing material.

No other adverse impacts, short or long-term, are foreseen for any other natural resources in the project area.

3.22 AERONAUTICS

A letter from the Aeronautics Division of the Montana Department of Transportation in Appendix B has stated, "This project has no impact on aviation activities or airports along the route". Therefore, no adverse impacts are anticipated to air travel in the project vicinity.

3.23 SECONDARY AND CUMULATIVE IMPACTS

Cumulative effects are those "...impacts which result from the incremental consequences of an action when added to the other past and reasonably foreseeable future actions" (40 CFR 1508.7). This proposed project has one active and one proposed project to the west and one recently completed project to the east. The one active project is Norris - East (which is part of the 3 Locations District 2 - Slope Flattening and Guardrail project,) and the one proposed project is Madison River - East. The recently completed project is Bozeman - Four Corners.

The purpose of the Norris - East project (STPHS 0002(189), Control No. 2959) is to install guardrail and slope flattening at various locations from km 0.0 and km 19.8 (M.P. 0.0 and M.P. 12.3) on Montana Primary Route P-84. This project is approximately 15.6 km (9.7 miles) from the Four Corners - West project. Due to its distant proximity to the Four Corners - West project, it will not have any and cumulative impacts on this project nor will the Four Corners - West project have any cumulative impacts on it.

The purpose of the Madison River - East project (F 84-2(1)12, Control No. 1832) is to reconstruct the existing roadway to current standards. This project begins at km 7.6 (M.P. 12.3) and extends in an easterly direction to km 35.7 (M.P. 22.2) - approximately where the Four Corners - West project begins. The tentative MDT "Ready Date" for this project is January 1, 2002. The nature of construction for the Madison River - East project is similar to the Four Corners - West project and should significantly improve this corridor of travel. The initial Environmental Assessment for the Madison River - East project show that the impacts from this project will not be significant. Therefore there should be no cumulative impacts on proposed project from this project and the proposed project should have no cumulative impacts on this project.

3.24 RELOCATION IMPACTS

This project will affect property owners at approximately station 74+60 north of the roadway and possibly affect property owners at approximately station130+30 south of the roadway and at approximately station 138+60 north of the roadway.

If relocations are necessary relocation assistance will be provided in accordance with the Uniform Relocation and Real Property Acquisition Act of 1970 (P.L. 91-646) and the Uniform Relocation Act amendments of 1987 (P.L. 100-17).

Every effort will be made to relocate people in similar properties in the same environment and nearby area. It is the policy of the Montana Department of Transportation that no person shall be displaced by the construction of any federally aided highway project unless, and until, adequate replacement housing has been provided. All replacement housing offered will be fair housing, open to all persons regardless of race, color, religion, sex or national origin.

3.25 EROSION CONTROL

An Erosion Control Plan will be submitted to the Montana Department of Environmental Quality's Water Quality Division in compliance with their Montana Pollutant Discharge Elimination System Regulations (ARM 16.20.1314) for this proposed project. Best Management Practices will be used in the design of this Plan using guidelines as established in MDT's Highway Construction Standard Erosion Control Workplan. The objective is to minimize erosion of disturbed areas during and following construction of this proposed project.

3.26 SEEDING

In accordance with **7-22-2152**, and **60-2-208 M.C.A.**, MDT will re-establish a permanent desirable vegetation community along all areas disturbed by the proposed construction. A set of revegetation guidelines will be developed by MDT that must be followed by the contractor. These specifications will include instructions on seeding methods, seeding dates, types and amount of mulch and fertilizer, along with seed mix components. Seed mixes include a variety of species to assure that areas disturbed by construction are immediately stabilized by vegetative cover. The Seeding Special Provisions developed for this proposed project will be forwarded to the Gallatin County Weed Board for approval.

3.27 THREATENED OR ENDANGERED SPECIES

A Biological and Sensitive Species Report and Biological Assessment have been completed for this project and are on file in the Helena office of the Montana Department of Transportation. The bald eagle and peregrine falcon are the only threatened or endangered species that have the potential to occur on the subject project. They do not nest on or near the project area based on nesting requirements, but these species could occur there hunting or migrating.

Bald Eagles

The bald eagle (Haliaeetus leucocephalus) is listed in Montana as endangered by the U.S. Fish and Wildlife Service (USFWS). Bald eagles are found in the project area primarily during spring and fall migrations and occasionally as winter residents. They may forage on road-killed big game, waterfowl, fish, jack rabbits and ground squirrels, which are plentiful in the area. There are no known bald eagle nest territories in or near the project, therefore this project is not likely to adversely affect bald eagles.

Peregrine Falcon

The peregrine falcon (Falco peregrinus anatum) is listed as endangered by the USFWS. No peregrine falcon eyries are known to occur on or near the project area and only occasional sightings of presumably migrating birds have been made. Therefore, this proposed project is not likely to adversely affect peregrine falcons or habitat critical to their survival.

4.0 AGENCY COORDINATION AND PUBLIC PARTICIPATION

4.0 AGENCY COORDINATION AND PUBLIC PARTICIPATION

4.1 LETTER OF INTENT

Coordination efforts were initiated by MDT in February 24, 1992, when a Letter of Intent was issued to federal, state and local agencies and affected private organizations and individuals concerning the project and its proposed intent. More specific informational requests were also made to certain governmental agencies regarding potential impacts the project might create. In all, letters were sent to nearly 200 addresses of agencies, property owners, and other interested parties. Comments and information were requested which would be relevant to this project. Copies of responses received are included in Appendix B.

4.2 PUBLIC INFORMATION MEETING

A public information meeting was held in March 1992 to discuss the proposal to reconstruct the highway through this area. The meeting was well attended, and strong public support was received. The minutes of the meeting have been documented and are on file with the Department of Transportation.

An additional public information meeting was held on April 14, 1998. Written and verbal comments were invited from all interested parties. The minutes of the meeting have been documented and are on file with the Department of Transportation. Copies of responses received are included in Appendix B.

Written comments will be received on this document for at least thirty (30) days following its distribution approval from the Federal Highway Administration. Unless comments received on this document warrant further investigation, no additional public involvement is planned. Public and agency comments on this document will be evaluated to determine whether significant impacts will occur from any of the proposed alternatives; if further consideration of the impacts discussed herein is needed; and if new issues have arisen that need to be addressed in the Environmental Assessment/Section 4(f) Evaluation, appropriate revisions will be made to the text of the Environmental Assessment/Section 4(f) Evaluation.

If no significant impacts are identified, MDT will submit the revised Environmental Assessment/Section 4(f) Evaluation to FHWA and request that the agency make a finding of NO Significant Impact (FONSI). The FONSI will then be attached to this document. Notice of availability of the FONSI and revised Environmental Assessment/Section 4(f) Evaluation will be make to Federal, State, and local government agencies with interests in the project.

If significant impacts are found, MDT must decide to proceed with this project by preparing an Environmental Impact Statement.

4.3 LOCATION AND DESIGN HEARING

A formal Location and Design Public Hearing on design issues may be held pending input from the county and local MDT officials.

5.0 PREPARERS/AGENCIES INVOLVED/ PERMIT AUTHORITIES

5.0 PREPARERS/AGENCIES INVOLVED/PERMIT AUTHORITIES

The Federal Highway Administration (FHWA) in cooperation with the Montana Department of Transportation (MDT) is responsible for preparation of this environmental assessment, including developing all conclusions and recommendations contained herein.

Other federal and state agencies cooperated in the preparation of this document. The following sections list the document preparers, agencies involved, and agency permit authority fo this project.

5.1 LIST OF AGENCIES WITH JURISDICTION AND PERMIT AUTHORITY

- US Army Corp of Engineers - Section 404 Permit
- Montana Dept of Environmental Quality - Section 402 Permit
- Montana Dept of Fish, Wildlife and Parks - Stream Protection Act 124 Permit
- Gallatin County Floodplain Administrator - Floodplain Development Permit

5.2 LIST OF OTHER AGENCIES, PERSONS, OR GROUPS CONTACTED

- Department of Health and Environmental Sciences
- Fish and Wildlife Enhancement
- Montana Natural Heritage Program
- United States Department of Agriculture - Soil Conservation Service
- Monforton School
- United States Department of Agriculture - Forest Service - Bozeman Ranger District
- Montana Department of Transportation - Aeronautics Division
- State Historic Preservation Office
- David Rousher - Forest Park on the Gallatin, Inc.
- United State Department of the Interior - National Park Service

5.3 DOCUMENT PREPARERS

Joel M. Marshik, P.E.
Manager - Environmental Services
Montana Department of Transportation
2701 Prospect Avenue
P.O. Box 201001
Helena, Montana 59620-1001

Janice W. Brown, Administrator
Region #8, Montana Division
Federal Highway Administration
2880 Skyway Drive
Helena, Montana 59602

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

APPENDIX A

ENVIRONMENTAL ASSESSMENT DISTRIBUTION LIST

Montana Department
of Transportation

2701 Prospect Avenue
Helena, MT 59620-9726

Stan Stephens, Governor

February 24, 1992

91-200

1¯
3¯

SUBJECT: Proposed Highway Improvement Project
Four Corners - West Project No. F 84-4(6)22
Parcel 4¯

Dear 2¯:

The Department of Transportation intends to develop a federal aid highway project on Montana 84 (Norris Road) and we would like to hear your comments and suggestions.

This project would begin at milepost milepost 22.2 just east of the Little Holland Road and extend 6.9 miles east to milepost 29.1 at the "Four Corners" intersection of Montana 84 and US191. Maps indicating a preliminary centerline are enclosed with this letter.

We propose to reconstruct the 2-lane roadway to more modern design standards. The new alignment will follow the existing corridor as much as possible, but the centerline will be adjusted to straighten and flatten the curves and hills while trying to limit impact on utilities and reduce the need for new right-of-way. Also note we are proposing to realign the intersection with the Amsterdam Road as shown on the enclosed map.

No firm letting date or schedule for construction is set. The project should be ready for construction about 1996, but this will depend on the difficulty of the design and new right-of-way needs, as well as the availability of funding.

We would like to hear from you; opinions on the project, environmental matters, problems this project could cause or eliminate, plans that could be affected, or any other matter you feel is appropriate. In addition, if there are agencies, groups or individuals that might be affected or concerned that aren't on the attached list, please let us know so that we might contact them.

Sincerely,

Dennis J Unsworth, Chief
Public Affairs Bureau

DJU/ch

Enclosures

Office of the Director
Environmental Quality Council
Capitol Post Office
P.O. Box 215
Helena, Montana 59620

Montana State Library
Montana Department of Education
1515 East 6th Avenue
Helena, Montana 59620

Gallatin County Commissioners
Gallatin County Courthouse
Bozeman, Montana 59715

Elementary District #27
6001 Monforton School Road
Bozeman, Montana 59715

APPENDIX B

RESPONSE LETTERS FROM VARIOUS AGENCIES

MONTANA NATURAL HERITAGE PROGRAM
1515 East Sixth Avenue
Helena, Montana 59620
(406) 444-3009

December 12, 1991

Winston R. Dyer
FORSGREN Associates/P.A.
P.O. Box 1032
West Yellowstone, MT 59758

Dear Mr. Dyer:

In response to your data request for information on sensitive species in the vicinity of your Gallatin Gateway Highway 84 project; we have checked our databases and currently have no information on sensitive species in that area.

Please remember that the results of a data search by the Montana Natural Heritage Program are not intended as a final statement on sensitive species within a given area, or as a substitute for on-site surveys needed for environmental assesments.

I hope this information is helpful. Please let us know if we can be of further assistance.

Sincerely,

Margaret Beer

Margaret Beer
Data Manager

The Nature Conservancy and Montana State Library

UNITED STATES
DEPARTMENT OF
AGRICULTURE

FOREST
SERVICE

BOZEMAN RANGER DISTRICT
601 NIKLES, BOX C, BOZEMAN MT 59715
(406) 587-6920

Reply to: 1560/7700

Date: December 23, 1991

Winston R. Dyer, P.E.
Forsgren Associates, P.A.
P.O. Box 1032
West Yellowstone, MT 59758

RE: Request for Environmental Information

Dear Mr. Dyer:

My staff and I have reviewed the information you provided on the proposed highway project from Four Corners - West, Subject 84-4 (6) 22, December 9, 1991.

The proposed highway project lies entirely outside the boundary of the Gallatin National Forest. No National Forest lands are located within, or in close proximity to, the present or proposed route. Therefore, there are no National Forest lands ajoining the project which may be classified as "Section 4(f) Lands" under the US Dept of Transportation Act.

Thank you for the opportunity to review and comment on this project. If you have any questions or need further information, please contact Jill Strelnik.

Sincerely,

Bob Dennee

ROBERT L. DENNEE
District Ranger

cc:
Forest Supervisor

FISH AND WILDLIFE ENHANCEMENT
FEDERAL BUILDING, US COURTHOUSE
301 S PARK
P O BOX 10023
HELENA MT 59626

FWE-61130-Billings
M.17-FHWA (Four Corners-West)

December 24, 1991

Mr. Winston R. Dyer, P.E.
Project Manager
Forsgren Associates, P.A.
P.O.Box 1032
West Yellowstone, Montana 59758

Dear Mr. Dyer:

This responds to your December 9, 1991 letter concerning Montana Department of Highways Project No. F84-4(6)22, (Four Corners-West), in Gallatin County, Montana, which requested identification of the threatened and endangered species that should be considered with this project. Your letter also invited other comments we may have.

The Federally-listed endangered and threatened species which occur or may occur within the project area are the bald eagle (Haliaeetus leucocephalus) and peregrine falcon (Falco peregrinus). Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, the Federal Highway Administration, as the responsible Federal agency, must determine if the proposed actions may affect these endangered species. If you or Federal Highway Administration determine that any of these species may be affected, it will be necessary to initiate formal consultation with this office. The following information and recommendations may aid you in that determination.

Both peregrine falcons and bald eagles may occur in the area as spring and/or fall migrants, and bald eagles may occur as winter residents. We are not aware of peregrine falcon or bald eagle nest territories in or near the project area. While we do not foresee any substantive issues with the proposed project with regard to the bald eagle and peregrine falcon, any power lines in the vicinity, if not properly constructed, could pose electrocution hazards for these species. To conserve these species and other large raptors protected by Federal law, we urge that any power lines that may need to be modified or reconstructed as a result of the project be raptor-proofed following the criteria and techniques outlined in the Raptor Research Report No. 4, "Suggested Practices for Raptor Protection on Power Lines - The State of the Art in 1981". A copy may be obtained from:

Jim Fitzpatrick, Treasurer
Raptor Research Foundation
Carpenter St. Croix Nature Center
12805 St. Croix Trail
Hastings, Minnesota 55033.

From the information provided, it appears there is a potential for the project to adversely impact wetland habitats. In this regard, we assume that a wetland inventory and impact assessment has or will be completed in accordance with the 1989, "Interagency Memorandum of Understanding: Management and Mitigation of Highway Construction Impacts to Wetlands in the State of Montana". We urge completion of any needed wetland mitigation in full accordance with that Memorandum of Understanding.

We appreciate your efforts to consider and conserve fish and wildlife resources, including threatened and endangered species. If you have questions regarding this letter, please contact Mr. Gary Wood of our Billings Suboffice (406) 657-6750.

Sincerely,

Wood

For Dale Harms
State Supervisor
Montana State Office

JGW/jf

cc: Edrie Vinson, Montana Department of Highways (Helena, MT)
Suboffice Coordinator, USFWS, Fish & Wildlife Enhancement (Billings, MT)

State Historic Preservation Office
Montana Historical Society
Mailing Address: 225 North Roberts • Helena, MT 59620-9990
Office Address: 102 Broadway • Helena, MT • (406) 444-7715

January 2, 1992

Winston Dyer
Forsgren Associates
P.O. Box 1032
West Yellowstone, MT 59758

RE: Four Corners-West (F84-4(6)22) Cultural Resource search

Dear Mr. Dyer:

As requested we have conducted a cultural resource records search and review for the project cited above. The following sites are currently documented in the designated search area:

24GA742	02S	03E	SE	11	Irrigation system
			SE	14	
24GA743	02S	03E	SE	11	Irrigation system
24GA811	02S	04E	Combination	14	Historic Travel
24GA810	02S	04E	NE	17	Historic School

Thank you for consulting with us.

Sincerely,

David Schwab

David Schwab
State Archaeologist

File:MFS

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
215 NORTH 17TH STREET
OMAHA, NEBRASKA 68102-4978

REPLY TO
ATTENTION OF

January 7, 1992

U.S. Army Corps of Engineers
1520 East 6th Avenue
Helena, Montana 59620-2301
(406) 444-6670

Winston R. Dyer
Forsgren Associates/P.A.
P.O. 1032
West Yellowstone, Montana 59758

Dear Mr. Dyer:

Reference is made to your letter concerning the proposed highway project Four Corners-West F 84-4 (6) 22 in Gallatin County, Montana.

Our preliminary review of what you submitted and an on-site inspection indicates that any fill activity may be authorized under a categorical exclusion if approved by the Federal Highway Administration.

Thank you for the opportunity to comment.

Sincerely,

Robert E. McInerney

Robert E. McInerney
State Supervisor
Helena Regulatory Office

Montana Department
of
Fish, Wildlife & Parks

1400 South 19th
Bozeman, MT 59715

January 24, 1992

Forsgren Associates, P.A.
P.O. Box 1032
West Yellowstone, MT 59758

Dear Mr. Dyer,

In consideration of your request for fisheries information re: the Four Corners West Project we can provide several comments. The only live stream crossing involves the Gallatin River at Shedds Bridge. As stated in your preliminary field review document, this bridge was new in 1987. We would not anticipate any fisheries impacts as long as all work performed is above the high watermark. The other crossings are irrigation ditches.

One additional consideration involves the access road into the Shedds Bridge Fishing Access Site just off the east end of the bridge. When we receive the plans for construction we will address any problems with that approach. Most wetlands along this stretch of highway, as stated in your preliminary review, are associated with irrigation activities. Because most of these activities in this area are not creating shallow water impoundments important for broad rearing or production, we would expect minimal impacts to waterfowl.

Please excuse the delay in the response.

Regards,

Robert R. Martinka
Regional Supervisor

RRM/kj

**Montana Department
of
Fish, Wildlife & Parks**

1420 East Sixth Avenue
Helena, Montana 59620

January 30, 1992

Mr. Winston R. Dyer, P. E.
Project Manager
Foresgran Associates/P. A.
P. O. Box 1032
West Yellowstone, MT 59758

RE: Four Corners - West F 84-4(6)22
Request for environmental information

Dear Mr. Dyer:

We have reviewed your above-mentioned proposed project area and would like to bring to your attention the existence of Shed's Bridge near the proposed highway project.

This fishing access site was developed with the assistance of federal money through the Land and Water Conservation Fund. If any part of the fishing access site will be affected by your construction project, we will have to work with the federal government to mitigate any impacts.

Please keep Bob Martinka, the regional supervisor of Region three, informed as this project develops. If you feel there may be a potential impact, please contact me and I will provide you with any additional information you may require.

Thank you for the opportunity to comment.

Sincerely,

Mary Ellen McDonald

Mary Ellen McDonald
Program Officer
Operations Bureau
Parks Division

cc: Bob Martinka
Jerry Walker, R-3 Park Manager
Dick Mayer, Design & Construction Bureau Chief
MDT District Engineer - Bozeman

FWC
BAW

Dan

NW

United States Department of Agriculture
Soil Conservation Service
Bozeman Field Office
601 Nikles Drive, Box B
Bozeman, MT 59725

MASTER
FILE
COPY

RECEIVED SEP 10 1992

February 21, 1992

Dennis J. Unsworth, Chief
Montana Department of Transportation
Public Affairs Bureau
2701 Prospect Avenue
Helena, MT 59620-9726

RE: Highway 84, F84-2 (1) 12
Madison River-East/Gallatin County

Dear Mr. Unsworth:

I have enclosed a copy of the AD-1006 that I sent to Druyvestein, Johnson and Anderson, consultants in Missoula. There will only be 1.52 acres of prime farmland affected by this part of the Highway 84 reconstruction. Much more prime farmland will be impacted from the east end of this project to Four Corners. We have this information available but it has not been requested yet.

We do not see any major adverse impacts caused by this project as long as good, accepted construction practices are followed and all the disturbed areas are seeded back to permanent vegetative cover.

Sincerely,

Gordon J. Hill

Gordon J. Hill
District Conservationist
Bozeman SCS Field Office

Date Recd. Preconst. 2/28/92

Act	Info	MAIL ROUTE	Attach	Initial
	✓	30 Preconst Engr		
	✓	30 Assistant		
		30 Office Mgr		
		31 Safety Mgmt.		
		32 Road Design		
		33 Environment		
		34 Hydraulics		
		35 Survey & Mapping		
		36 Traffic Eng.		
		37 Traffic Operations		
	✓	39 Consultant Dsn.		
	✓	Dist Eng Butte		
	✓	Public AFFAIRS	(the orange stamp)	
	✓	File		

MASTER FILE COPY

FISH AND WILDLIFE ENHANCEMENT
FEDERAL BUILDING, US COURTHOUSE
301 S PARK
P O BOX 10023
HELENA MT 59626

FWE-61130-Billings
M.17-FHWA (Four Corners-West)

May 6, 1992

Mr. Dennis J. Unsworth, Chief
Public Affairs Bureau
Montana Department of Transportation
2701 Prospect Avenue
Helena, Montana 59620-9726

Dear Mr. Unsworth:

This responds to your February 24, 1992 letter concerning proposed Montana Department of Transportation Project F84-4(6)22, Four Corners-West. The U.S. Fish and Wildlife Service has previously commented on this project, in a letter dated December 24, 1991 (copy enclosed). The comments contained in that letter remain pertinent. We have no further comments on the proposal at the present time.

Sincerely,

John G. Wood
for
Dale Harms
State Supervisor
Montana State Office

JGW/jf

cc: Scott Jackson, USFWS, Fish & Wildlife Enhancement (Helena, MT) [w/copy enclosure]
Suboffice Coordinator, USFWS, Fish & Wildlife Enhancement (Billings, MT)

"Take Pride in America"

Date Recd. Preconst 5-27-92

Act	Info	MAIL ROUTE	Attach	Initial
✓	✓	30 Preconst Engr		
	✓	30 Assistant		
		30 Office Mgr		
		31 Safety Mgmt.		
		32 Road Design		
		33 Environment		
		34 Hydraulics		
		35 Survey & Mapping		
		36 Traffic Eng.		
		37 Traffic Operations		
✓		39 Consultant Dsn.		
✓		File		

Copy to Environment
Copy to District
Copy to Consultant
DWB 6-2-92

RWB
JWC

MONFORTON SCHOOL
6001 MONFORTON SCHOOL ROAD • BOZEMAN, MONTANA 59715 • PHONE (406) 586-1557

MASTER FILE COPY

May 7, 1992

RECEIVED
JUN 08 1992

Dennis J. Unsworth, Chief
Public Affairs Bureau
Montana Department of Transportation
2701 Prospect Avenue
Helena, MT 59620-9726

Dear Mr. Unsworth:

Thank you for your letter of February 24. I appreciate the opportunity to comment on the Proposed Highway Improvement Project: Four Corners - West (F 84-4(6) 22). I strongly recommend that a bike/walkway be constructed on the North and South sides of the highway (separate from the highway--not just an extension of the highway) from the Gallatin River to Four Corners.

There are many students who walk and/or ride their bikes to Monforton School from this area. This is a dangerous road for biking and walking as there are no designated bike/walkways and motorists do not know that there is a school in the area. It would be an ideal time during the rebuilding of Norris road to build these bike/walkways to better ensure safety for school children.

The school has worked with the Highway department regarding the building of bike/walk ways for the North and South sides of Huffine Lane going east into Bozeman. The designs reflect the bike/walkway and they have been approved by the state.

Please carefully consider my request as the safety of our children is of paramount importance. If you have any questions, please contact me. I look forward to your reply.

Thank you for your interest and consideration in this important issue.

Sincerely,

Kathy Pattee

Kathy Pattee
Principal

fac

Date Recd. Preconst. 5-22-92

MAIL ROUTE

	30 Preconst Engr	30 Assistant	30 Office Mgr	31 Safety Mgmt.	32 Road Design	33 Environment	34 Hydraulics	35 Survey & Mapping	36 Traffic Eng.	37 Traffic Operations	39 Consultant Dsn.	Dist Eng Butte	RP Eng Butte	File
Initial														
Attach														
Info	✓	✓				✓					✓	✓	✓	✓
Act										✓				

Copy to consultant

FISH AND WILDLIFE ENHANCEMENT
FEDERAL BUILDING, US COURTHOUSE
301 S PARK
P O BOX 10023
HELENA MT 59626

FWE-61130-Billings
M.17-FHWA ~~(Four Corners West)~~ (I)

May 6, 1992

Mr. Dennis J. Unsworth, Chief
Public Affairs Bureau
Montana Department of Transportation
2701 Prospect Avenue
Helena, Montana 59620-9726

Dear Mr. Unsworth:

This responds to your February 24, 1992 letter concerning proposed Montana Department of Transportation Project F84-4(6)22, Four Corners-West. The U.S. Fish and Wildlife Service has previously commented on this project, in a letter dated December 24, 1991 (copy enclosed). The comments contained in that letter remain pertinent. We have no further comments on the proposal at the present time.

Sincerely,

John G. Wood
FOR
Dale Harms
State Supervisor
Montana State Office

JGW/jf

cc: Scott Jackson, USFWS, Fish & Wildlife Enhancement (Helena, MT) [w/copy enclosure]
Suboffice Coordinator, USFWS, Fish & Wildlife Enhancement (Billings, MT)

DEPARTMENT OF
HEALTH AND ENVIRONMENTAL SCIENCES
AIR QUALITY BUREAU

STAN STEPHENS, GOVERNOR
COGSWELL BUILDING
STATE OF MONTANA
(406) 444-3454
FAX # (406) 444-1374
HELENA, MONTANA 59620

[illegible]

MASTER FILE COPY

May 7, 1992

Dennis Unsworth
Montana Department of Transportation
2701 Prospect Avenue
Helena, MT 59620

Dear Mr. Unsworth:

This is in response to your letter of notification regarding the highway improvement project designated as Four Corners - West [F 84-4(6)22]. The Four Corners area is assumed to be in compliance with all federal and state air quality regulations. The temporary nature of this project will not affect the compliance with the federally approved SIP for the area.

Asphalt plants and gravel crushers are required to obtain air quality permits to operate in the state and construction activities are required to use dust suppression in and near residential areas.

Thank you for the opportunity to comment on this proposal.

Sincerely,

Warren Norton
Environmental Specialist

WN:tjl

Date Recd. Preconst 05-13-92

Act	Info	MAIL ROUTE	Attach	Initial
✓	✓	30 Preconst Engr		
✓	✓	30 Assistant		
		30 Office Mgr		
		31 Safety Mgmt.		
		32 Road Design		
		33 Environment		
		34 Hydraulics		
		35 Survey & Mapping		
		36 Traffic Eng.		
		37 Traffic Operations		
✓	✓	39 Consultant Des.		
✓	✓	File		

Pre Con. File.

Copy to Bitn
Copy to Consul
[illegible] 5-15

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
215 NORTH 17TH STREET
OMAHA, NEBRASKA 68102-4978

May 8, 1992

REPLY TO
ATTENTION OF
Planning Division

Mr. Dennis J. Unsworth, Chief
Public Affairs Bureau
Montana Dept of Transportation
2701 Prospect Avenue
Helena, MT 59620-9726

MASTER
FILE
COPY

Dear Mr. Unsworth:

We have reviewed the proposed reconstruction of Morris road and realignment of the intersection with Amsterdam Road in Gallatin County, Montana, reference F84-4(6)22 and offer the following comments.

The design of the proposed project should ensure that it is in compliance with flood plain management criteria of Gallatin County and the State of Montana. As a minimum, the design should ensure that the 100-year flood water surface elevation of any stream affected is not increased more than one foot relative to pre-project conditions. It is desirable, however, that water surface elevations either remain the same or decrease as a result of this project.

If you have not already done so, we recommend that you consult with the U.S. Fish and Wildlife Service and the state agency responsible for fish and wildlife resources. In addition, the State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

It appears that some of the construction could take place in waterways or wetlands which are classified as waters of the United States and are therefore regulated under Section 404 of the Clean Water Act. If construction activities involve the temporary or permanent placement of dredged or fill material into waters of the United States, a Section 404 permit may be required. For a detailed review of the permit requirements, final project plans should be sent to Mr. Robert McInerney, U.S. Army Corps of Engineers, c/o DNRC/CDD, 1520 East 6th Ave, Helena, MT 59620-2301.

If you have any questions, please contact Ms. Julie Swoboda at 402-221-4895. Thank you for the opportunity to review this proposal.

Sincerely,

Robert S. Nebel
for ~~Ric~~hard D. Gorton, Chief
Environmental Analysis Branch
Planning Division

Date Recd. Preconst. 5/22/92

MAIL ROUTE

	30 Preconst Engr	30 Assistant	30 Office Mgr	31 Safety Mgmt.	32 Road Design	33 Environment	34 Hydraulics	35 Survey & Mapping	36 Traffic Eng.	37 Traffic Operations	39 Consultant Dsn.	[illegible]	PB.	File
Initial														
Attach														
Info	✓	✓				✓						✓	✓	✓
Act										✓				

copy to consultant

MDT

Montana Department of Transportation

Aeronautics Division
Box 5178
2630 Airport Road
Helena, MT 59604

Phone (406)444-2506
FAX (406)444-2519

Stan Stephens, Governor

MASTER
FILE
COPY

May 11, 1992

Mr. Dennis Unsworth
Chief, Public Affairs
Montana Department of Transportation
2701 Prospect Avenue
Helena, MT 59620-9726

Subject: Four Corners-West (F 84-4(6)22)

Dear Mr. Unsworth:

Thank you for allowing us to comment on the Four Corners-West proposed highway improvement project.

This project has no impact on aviation activities or airports along the route.

Sincerely,

Michael D. Ferguson, Administrator
Aeronautics Division

Redge Meierhenry
Aviation Representative

pk

Date Recd. Preconst 05-13-92

Act	Info	MAIL ROUTE	Attach	Initial
✓	✓	[illegible]		
✓	✓	[illegible]		
		37 Traffic Operations		
✓		39 Consultant Dsn.		
✓		File		

Copy to District
Copy to Consultant
[illegible] 5-18-92

United States Department of the Interior

NATIONAL PARK SERVICE

ROCKY MOUNTAIN REGIONAL OFFICE
12795 W. ALAMEDA PARKWAY
P.O. BOX 25287
DENVER, COLORADO 80225-0287

TAKE PRIDE IN AMERICA

GWB
JWC

IN REPLY REFER TO:

L7619 (RMR-PP)

MAY 12 1992

MASTER
FILE
COPY

Mr. Dennis J. Unsworth, Chief
Public Affairs Bureau
Montana Department of Transportation
2701 Prospect Avenue
Helena, Montana 59620-9726

Dear Mr. Unsworth:

We have reviewed the information you sent us regarding the proposed highway improvement project, Four Corners - West (F 84-4(6)22) in Gallatin County, Montana.

Part of the road planned for upgrading is bounded on both sides by Shed's Bridge Fishing Access Site. Shed's Bridge Fishing Access Site has received assistance from the Land and Water Conservation Fund (L&WCF), and therefore, the property is subject to the provisions of Section 6(f) of the L&WCF Act, as amended. The provisions of the Act stipulate that changes from outdoor recreation use be approved by the Secretary of the Interior and require the substitution of other properties of at least equal fair market value and reasonably equivalent usefulness and location for the recreation lands to be taken.

If the highway project requires any additional right-of-way in this area, it may involve a taking as described in Section 6(f). Please maintain contact with the State Liaison Officer to assure compliance with 6(f) requirements. The State Liaison Officer for Montana is Dr. Arnold Olsen, Administrator, Parks Division, Montana Department of Fish, Wildlife and Parks, 1420 East 6th Avenue, Helena, Montana 59601.

Thank you for keeping us informed of proposed highway projects.

Sincerely,

Michael D. Snyder

Michael D. Snyder
Associate Regional Director
Planning and Assistance

cc:
Dr. Arnold Olsen, Administrator, Parks Division, Montana Department of Fish, Wildlife, and Parks

Date Recd. Preconst. 5/22/92
MAIL ROUTE
Initial
Attach
30 Preconst Engr
30 Assistant
30 Office Mgr
31 Safety Mgmt.
32 Road Design
33 Environment
34 Hydraulics
35 Survey & Mapping
36 Traffic Eng.
37 Traffic Operations
39 Consultant Dsn.
File
Info
Act

Copy to consultant
GWB 6-2-92

FWB
JWL

MASTER
FILE
COPY

May 19, 1992

Mr. Dennis J. Unsworth
Montana Department of Transportation
2701 Prospect Ave
Helena, Mt. 59620

Re: Proposed Highway Improvement Project
Four Corners

Dear Mr. Unsworth;

I am responding to your invitation to give opinions, environmental matters, etc on the project.

My question and statement is this. We own Forest Park on the Gallatin, a mobile home park. We have hired an engineer in Bozeman to represent us in our future park expansion project. Our property has room to expand approximately 75 spaces and we would like to undertake this endeavor. However, we have run into roadblock after roadblock with the county. We have jumped through all of their hoops and blew all their whistles that they have asked us to do. However, the county is now "asking" us to construct a dike upstream of our park approximately .5 miles because the river will someday overshoot it's bank and flood our property. We feel that this is entirely ridiculous and would like some help from you, if possible.

I am sure that you have done studies in this area that would indicate the need to raise the road or to do any other type of precautionary measure to ensure that the road will not be washed out in case there is such a major overflowing of the river. If you have, would you please let us have any of that information. If you have found the need to do any type of measure, would you also let us have that information. ANY information would be helpful as to what and why the State of Montana is doeing or not doing in regards to the Gallatin River flooding possibility.

We would like to use any and all information you have in regards to this matter. We then can present that to the county in hopes of getting realistic conditions when it comes to our expansion project.

Sincerely yours,
Rousher
David Rousher
Secretary/Treasurer
Forest Park on the Gallatin, Inc.

Date Rec'd 5/22/92 Disposal

Fred
Maybe Hydraulics
or the Consult
can help

Act

copy to consultant
FWB 6-2-92

DEPARTMENT OF
HEALTH AND ENVIRONMENTAL SCIENCES
Solid and Hazardous Waste Bureau
Solid Waste Program
STAN STEPHENS, GOVERNOR (406) 444-1430 FAX #(406) 444-1499
STATE OF MONTANA
OFFICE LOCATION: 836 Front Street Helena, Montana
MAILING ADDRESS: Cogswell Building Helena, MT 59620

Date Recd. Preconst 05-27-92

MAIL ROUTE

Act	Info		Attach	Initial
		30 Preconst Engr		
✓		30 Assistant		
		30 Office Mgr		
		31 Safety Mgmt.		
		32 Road Design		
		33 Environment		
		34 Hydraulics		
		35 Survey & Mapping		
		36 Traffic Eng.		
		37 Traffic Operations		
✓		39 Consultant Dsn.		
✓		File		

May 20, 1992

Dennis J. Unsworth, Chief
Public Affairs Bureau
Montana Department of Transportation
2701 Prospect Avenue
Helena, Montana 59620-9726

SUBJECT: Four Corners Highway Project

Dear Mr. Unsworth:

I am writing to you in response to your request for feed-back regarding the potential impact the project to straighten a portion of highway between Four Corners and Norris may have on the environment. The Solid and Hazardous Waste Bureau is concerned about the disposal of the solid waste generated from this project. Stripped asphalt which cannot be reused in a beneficial manner on the project is considered a group II waste and should be placed in a Class II (household and construction waste) landfill. Concrete, tree branches, unpainted wood wastes, and clean fill are considered group III wastes and can be deposited in a Class III (concrete and untreated wood waste) landfill. In this region of Montana there are several licensed Class II landfills that might accept the projects solid waste. They include:

City of Bozeman Class II Landfill - P.O. Box 640, Bozeman, MT 59715
Roger Sicz - 586-3321

Gallatin County Refuse District #1-Logan - P.O. Box 146, Manhattan, MT 59741
Don Skelton - 388-1754

The Bureau recommends getting the operators' approval before taking material there. It is also suggested that you reuse the old asphalt for new road surfaces or for repair work instead of placing it in a licensed Class II landfill.

Another concern is whether any regulated quantities of hazardous wastes will be generated by this project. Regulated hazardous waste is any material that because of its ignitability, corrosivity, reactivity, and toxicity may endanger humans and the environment. It is also a regulated hazardous waste if it is listed under the Environmental Protection Agency's Subtitle C regulations. This material requires special handling and disposal. This would be dependant upon the quantity and type of waste generated. Some examples of potential regulated hazardous waste include spent parts cleaner, paint thinners, or other solvents.

AN EQUAL OPPORTUNITY EMPLOYER

Copy to Environment
Copy to consultant
Copy to district

Good luck on this project. If you have any questions or comments, please do not hesitate to contact me.

Sincerely,

Lara M. Dando

Lara M. Dando
Solid Waste Program

larad\wp\letters.92\blockgnt\fourcorn.57

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

STAN STEPHENS, GOVERNOR

LEE METCALF BUILDING
1520 EAST SIXTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-6699
TELEFAX NUMBER (406) 444-6721

HELENA, MONTANA 59620-2301

MEMORANDUM

May 29, 1992

TO: Jim Bond
Information Officer

FROM: Karl Christians
CAP Manager

RE: Project: (F 84-4(6)22)
Proposed Four Corners - West Highway Improvements

The above proposed project for the reconstruction of highway 84 in Gallatin County crosses the Gallatin River which has the 100-year floodplain delineated on the Flood Insurance Rate Maps for Gallatin County.

Gallatin county is regulated by the Administrative Rules of Montana as well as the minimum NFIP requirements. This project will require a floodplain development permit and shall adhere to the floodplain regulations administered by the Gallatin County floodplain administrator who can be reached at the following address:

Ms. Mary Kay Peck
Courthouse
311 West Main, Room 3
Bozeman, Mt 59715
Phone: 585-1465

The Floodplain Management Section is always available to offer any technical assistance that may be needed.

GENERAL COMMENTS

The main concern would be that they design bridges and rip rap that will convey water flows equal to or greater than a 100-year discharge rate and minimize flow obstruction.

If I can be of further assistance, please contact me at 444-6654.

CENTRALIZED SERVICES DIVISION (406) 444-6700
CONSERVATION & RESOURCE DEVELOPMENT DIVISION (406) 444-6667
ENERGY DIVISION (406) 444-6697
OIL AND GAS DIVISION (406) 444-6675
WATER RESOURCES DIVISION (406) 444-6601

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

STAN STEPHENS, GOVERNOR

LEE METCALF BUILDING
1520 EAST SIXTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-6699
TELEFAX NUMBER (406) 444-6721

HELENA, MONTANA 59620-2301

June 2, 1992

MASTER
FILE
COPY

CC: Consultant
Design

Mr. Dennis J. Unsworth, Chief
Public Affairs Bureau
Montana Department of Transportation
2701 Prospect
Helena, MT 59620

Re: F 84-4(6)22
Four Corners - West

You recently invited comments pertaining to the referenced project. The Department of Natural Resources and Conservation has these concerns.

First, water may be needed for dust control or some other construction-related purpose. If the contractor uses surface water or more than 35 gallons per minute or 10 acre-feet of ground water, a temporary water use permit will have to be obtained. For information about application forms and procedures, contact the DNRC Water Resources Regional Office, 1201 E. Main, Bozeman, MT 59715 (phone 586-3136).

Second, this project may affect irrigation facilities. Care should be taken during construction not to interfere with existing water rights and any facilities that may be involved should be maintained or replaced. Our Bozeman Regional Office can provide information on any water rights that may be affected.

Third, the project crosses the designated 100-year floodplain for Gallatin County and a floodplain development permit is required. Please see the attached memorandum from Karl Christians.

Thank you for the opportunity to comment.

Sincerely,

Jim Bond

Jim Bond
Information Officer/
Citizen Participation Advocate

attach: memo

copy: Ron Guse, Water Rights Bureau
Karl Christians, Engineering Bureau
Bozeman Regional Office
Intergovernmental Review Clearinghouse

Date Recd. Preconst. 6-8-92
MAIL ROUTE
RECEIVED
JUN 5 1992
ENVIRONMENTAL BUREAU

Act	Info		Attach	Ini
	✓	30 Preconst Engr	✓	✓
	✓	30 Design		✓
		30 Office Mgr	✓	
		31		
		32 Road Design		
		33 Environment		
		34 Hydraulics		
		35 Survey & Mapping		
		36 Traffic Eng.		
		37 Traffic Operations		✓
	✓	38 Consultant Dsn.	✓	
	✓	File		

Copy to District
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copy to Environment
GWB
7-14-92

CENTRALIZED SERVICES DIVISION (406) 444-6700
CONSERVATION & RESOURCE DEVELOPMENT DIVISION (406) 444-6667
ENERGY DIVISION (406) 444-6697
OIL AND GAS DIVISION (406) 444-6675
WATER RESOURCES DIVISION (406) 444-6601

RECEIVED AUG 19 1992

③

United States Department of the Interior

NATIONAL PARK SERVICE

ROCKY MOUNTAIN REGIONAL OFFICE
12795 W. ALAMEDA PARKWAY
P.O. BOX 25287
DENVER, COLORADO 80225-0287

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

L7619 (RMR-PP)
ER 92/447

MASTER FILE COPY

JUN 17 19

Mr. Dennis J. Unsworth, Chief
Public Affairs Bureau
Montana Department of Transportation
2701 Prospect Avenue
Helena, Montana 59620-9726

Dear Mr. Unsworth:

Please refer to our letter of May 12, 1992, (copy attached) wherein we commented on the proposed Four Corners - West (F 84-4(6)22) highway improvement project in Gallatin County, Montana.

We would like to add one more comment, as follows.

If the proposed project will receive Federal funding and will use land from Shed's Bridge Fishing Access Site for right-of-way or easements, it will be necessary to comply with the provisions of Section 4(f) of the Department of Transportation Act, as amended, and prepare a Section 4(f) determination.

Sincerely,

for Michael D. Snyder
Associate Regional Director
Planning and Assistance

cc:
Dr. Arnold Olsen, Administrator, Parks Division, Montana Department of Fish, Wildlife, and Parks, w/enc.
DOI, Office of Environmental Affairs, w/enc.
DOI, Regional Environmental Officer, Denver, w/enc.

Copy to consultant
Copy to District

United States Department of the Interior

FISH AND WILDLIFE SERVICE
FISH AND WILDLIFE ENHANCEMENT
FEDERAL BUILDING, US COURTHOUSE
301 S PARK, P O BOX 10023
HELENA MT 59626

IN REPLY REFER TO:

M.17 FHWA (I)

June 22, 1992

Dennis J. Unsworth, Chief
Public Affairs Bureau
Montana Department of Transportation
2701 Prospect Avenue
Helena, MT 59620-9726

MASTER
FILE
COPY

Dear Mr. Unsworth:

This responds to a June 1, 1992 request from the U. S. Department of the Interior's Office of Environmental Affairs (OEA) to comment on the Montana Department of Transportation's Notice of Intent to prepare an Environmental Impact Statement for the Four Corners - West project (F 84-4(6)22), Gallatin County, Montana. The OEA's reference number for this project is **ER 92/447.**

The Fish and Wildlife Service's Montana State Office has previously commented on this project in letters dated December 24, 1991 and May 6, 1992 (copies enclosed). The comments contained in those letters remain pertinent. We have no further comments on this project at this time.

Sincerely,

Dale Harms

Dale R. Harms
State Supervisor
Montana State Office

SDJ/sdj

Enclosures

cc: BFA (ERT)

bcc: ARD, FWE, Region 6, Denver, CO (Attn: Dale Hoffman)

"Take Pride in America"

Copy to Environme
Copy to Consultant
Copy to District
Fwb 7-14-92

D. S. Johnson

RECEIVED
AUG 06 1992
ENVIRONMENTAL BU

State Historic Preservation Office
Montana Historical Society
Mailing Address: 225 North Roberts • Helena, MT 59620-9990
Office Address: 102 Broadway • Helena, MT • (406) 444-7715

MASTER FILE
COPY

Date Recd. Preconst.
MAIL ROUTE
8-7-92 cc D. S. Johnson
✓ 30 Preconst Engr
30 Assistant
30 Office Mgr
31 Safety Mgmt.
32 Road Design
33 Environment
34 Hydraulics
35 Survey & Mapping
36 Traffic Eng.
37 Traffic Operations
✓ 39 Consultant Dsn.
✓ File

August 4, 1992

Edrie L. Vinson, Chief
Environmental and Hazardous Waste Bureau
Montana Department of Transportation
2701 Prospect Avenue
Helena, MT 59620-9726

Re: F 84-4(6)22
Four Corners - West
Control No. 1831

Dear Edrie:

Thank you for the opportunity to comment on the project identified above, in the framework of 36CFR800.

We concur with your findings that the following properties are unlikely to qualify for listing in the National Register of Historic Places:

24GA965
24GA966
24GA968
24GA969
24GA970
24GA971
24GA971
24GA972
24GA973
24GA981

We also concur with your finding that Pine Butte School, 24GA810, likely does qualify for listing in the National Register under Criterion A and C.

Finally, we note that the irrigation ditches are addressed in a formally signed programmatic agreement. We are assuming for the purposes of this project that the historic railroad is being considered part of the C.M.St.P.&P. Please call if that is not the case.

Sincerely,

Kathy

Katherine Huppe
Historical Survey Reviewer

File: COMP, MDOH, project file
CD/ 24GA810, Pine Butte School

Copy to District
Copy to Consultant
GWB 8-10-92

United States
Department of
Agriculture

Soil
Conservation
Service

601 Nikles Drive
Box B
Bozeman, MT 59715

December 3, 1992

Forsgren Associates, P.A.
Winston R. Dyer, P.E.
15 Madison Avenue
P.O. Box 1032
West Yellowstone, MT 59758

RE: Four Corners West Highway F84-4(6)22
Prime Farmland Information

Dear Mr. Dyer:

I have enclosed the AD-1006, a soils map and descriptions that you requested in a letter dated November 13, 1992. If the right of way was 50 feet on each side of the centerline (100 feet wide total) there would be 24.8 acres of prime farmland impacted by this project. The soils must not have slopes that exceed four percent and must be irrigated to be considered as prime farmland.

This project should not have a major effect on this area as long as good, accepted construction practices are followed and all disturbed areas are seeded to permanent vegetative cover.

Sincerely,

Gordon J. Hill

Gordon J. Hill
District Conservationist
Bozeman SCS Field Office

GALLATIN COUNTY SOIL SURVEY
NONTECHNICAL SOIL DESCRIPTIONS
12/04/91

0064B--STRAW LOAM, 0 TO 4 PERCENT SLOPES

SETTING

LANDSCAPE: Nearly level plains
ELEVATION: 4400-5000 feet GROWING SEASON: 90-110 days
ANNUAL PRECIPITATION: 15-19 inches MAPUNIT SLOPE RANGE: 0-4 %
MAJOR USES: Nonirr and irr cropland, rangeland

* * * * * * * * *

TYPICAL PROFILE AND SOIL PROPERTIES FOR Straw
Surface to 18 inches - loam
18 to 60 inches - loam and clay loam

DEPTH OF SOIL: >60 INCHES FLOODING: none
DEPTH TO WATER TABLE: >6 FEET

* * * * * * * * *

CONSIDERATIONS FOR USE:
This mapunit may contain areas 20-40 in.to sand & gravel, water table <6 feet.

* * *

0407A--SUDWORTH-NESDA LOAMS, 0 TO 2 PERCENT SLOPES

SETTING

LANDSCAPE: Nearly level plains
ELEVATION: 4700-5200 feet GROWING SEASON: 90-110 days
ANNUAL PRECIPITATION: 15-19 inches MAPUNIT SLOPE RANGE: 0-2 %
MAJOR USES: Irr cropland, pastureland

* * * * * * * * *

TYPICAL PROFILE AND SOIL PROPERTIES FOR Sudworth
Surface to 29 inches - loam
29 to 60 inches - extremely gravelly sand

DEPTH OF SOIL: >60 INCHES FLOODING: none
DEPTH TO WATER TABLE: 3-6 FEET

* * * * * * * * *

TYPICAL PROFILE AND SOIL PROPERTIES FOR Nesda
Surface to 11 inches - loam
11 to 60 inches - extremely gravelly loamy sand and sand

DEPTH OF SOIL: >60 INCHES FLOODING: none
DEPTH TO WATER TABLE: 3-6 FEET

* * * * * * * * *

CONSIDERATIONS FOR USE:
These soils are 10-40 inches to sand and gravel, water tables at 3-6 feet.

* * *

---

* SITE SPECIFIC USE OF INFORMATION REQUIRES ONSITE INVESTIGATION *

```
==========================================================================
0453B--AMSTERDAM-QUAGLE SILT LOAMS, 0 TO 4 PERCENT SLOPES

                          SETTING
LANDSCAPE: Nearly level uplands
ELEVATION: 4700-5500 feet               GROWING SEASON: 90-115  days
ANNUAL PRECIPITATION: 15-19 inches      MAPUNIT SLOPE RANGE: 0-4   %
MAJOR USES: Nonirr and irr cropland
                  *  *  *  *  *  *  *  *  *
 TYPICAL PROFILE AND SOIL PROPERTIES FOR Amsterdam
     Surface to 8 inches - silt loam
     8 to 42 inches - silt loam
     42 to 60 inches - very fine sandy loam


DEPTH OF SOIL: >60   INCHES                FLOODING: none
DEPTH TO WATER TABLE: >6    FEET
                  *  *  *  *  *  *  *  *  *
 TYPICAL PROFILE AND SOIL PROPERTIES FOR Quagle
     Surface to 7 inches - silt loam
     7 to 60 inches - silt loam



DEPTH OF SOIL: >60   INCHES                FLOODING: none
DEPTH TO WATER TABLE: >6    FEET
                  *  *  *  *  *  *  *  *  *
CONSIDERATIONS FOR USE:
Some soils in this mapunit may contain 15-35% rock fragments in
surface layer.
************************************************************************
0510B--MEADOWCREEK LOAM, 0 TO 4 PERCENT SLOPES

                          SETTING
LANDSCAPE: Nearly level plains
ELEVATION: 4000-4500 feet               GROWING SEASON: 90-110  days
ANNUAL PRECIPITATION: 12-18 inches      MAPUNIT SLOPE RANGE: 0-4   %
MAJOR USES: Irr cropland, pastureland, rangeland
                  *  *  *  *  *  *  *  *  *
 TYPICAL PROFILE AND SOIL PROPERTIES FOR Meadowcreek
     Surface to 11 inches - loam
     11 to 25 inches - stratified sandy loam and silt loam
     25 to 60 inches - very gravelly loamy sand


DEPTH OF SOIL: >60   INCHES                FLOODING: none
DEPTH TO WATER TABLE: 3-6   FEET
                  *  *  *  *  *  *  *  *  *
CONSIDERATIONS FOR USE:
This mapunit may contain areas <20 in. to sand & gravel, water
table <3 feet.
************************************************************************
```

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)	Date of Land Evaluation Request November 13, 1992
Name of Project Four Corners - West	Federal Agency Involved USDoT - Federal Highway Administration
Proposed Land Use Highway Right-of-Way	Gallatin County, Montana
PART II (To be completed by SCS)	Date Request Received by SCS

Does the site contain prime, unique, statewide or local important farmland? Yes X No ☐ (If no, the FPPA does not apply - do not complete additional parts of this farm.)	Acres Irrigated	Average Farm Size 886 AC
Major Crop(s) Alfalfa & Small Grains	Farmable Land in Govt. Jurisdiction Acres: N/A %	Amount of Farmland as Defined in FPPA Acres: 24.8 %
Name of Land Evaluation System Used Soil Survey	Name of Local Site Assessment System N/A	Date Land Evaluation Returned by SCS 12-3-92

PART III (To be completed by Federal Agency)		Alternate Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres to be converted directly					
B. Total Acres to be converted indirectly					
C. Total Acres in Site					
PART IV (To be completed by SCS) Land Evaluation Information					
A. Total Acres Prime and Unique Farmland		24.8 AC			
B. Total Acres Statewide and Local Important Farmland					
C. Percentage of Farmland in County or Local Govt., unit to be converted		< 1%			
D. Percentage of farmland in Govt. Jurisdiction with same or higher relative value.		N/A			
PART V (To be completed by SCS) Land Evaluation Criterion Relative Value of Farmland to be converted (Scale of 0 to 100 Points)					
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.8(b))	Max. Pts.				
1. Area Nonurban Use	15	10			
2. Perimeter in Nonurban Use	10	5			
3. Percent of Site Being Farmed	20	15			
4. Protection Provided by State and Local Govt.	20	0			
5. Distance from Urban Builtup Area	N/A	0			
6. Distance to Urban Support Services	N/A	0			
7. Size of present farm unit compared to average	10	1			
8. Creation of nonfarmable farmland	25	0			
9. Availability of farm support services	5	0			
10. On-farm investments	20	5			
11. Effects of conversion on farm support services	25	0			
12. Compatibility with existing agricultural use	10	0			
TOTAL SITE ASSESSMENT POINTS	160	36			
PART VII (To be completed by Federal Agency)					
Relative value of farmland (From Part V)	100	100			
Total Site Assessment (From Part VI above or a local site assessment)	160	36			
TOTAL POINTS (Total of above 2 lines)	260	136			

Site Selected:	Date of Selection	Was a Local Site Assessment Used? Yes ☐ No X

Reason for Selection:

(See instructions on reverse side)

Form AD-1006(10-83)

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form.

Step 2 - Originator will send copies A, B and C, together with maps indicating locations of site(s), to the Soil Conservation Service (SCS) local field office and retain copy D for their files. (Note: SCS has a field office in most counties in the US. The field office is usually located in the county seat. A list of field office locations are available from the SCS State Conservationist in each state).

Step 3 - SCS will, within 45 calendar days after receipt of form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland.

Step 4 - In cases where farmland covered by the FPPA will be converted by the proposed project, SCS field offices will complete Parts II, IV and V of the form.

Step 5 - SCS will return copy A and B of the form to the Federal agency involved in the project. (Copy C will be retained for SCS records).

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 - The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies.

INSTRUCTION FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

Part I: In completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: In completing item B (Total Acres to be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.

2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

Part VI: Do not complete Part VI if a local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type projects such as transportation, powerline and flooded control, criteria #5 and #6 will not apply and will be weighted zero, however, criterion #8 will be weighted a maximum of 25 points, and criterion #11 a maximum of 25 points.

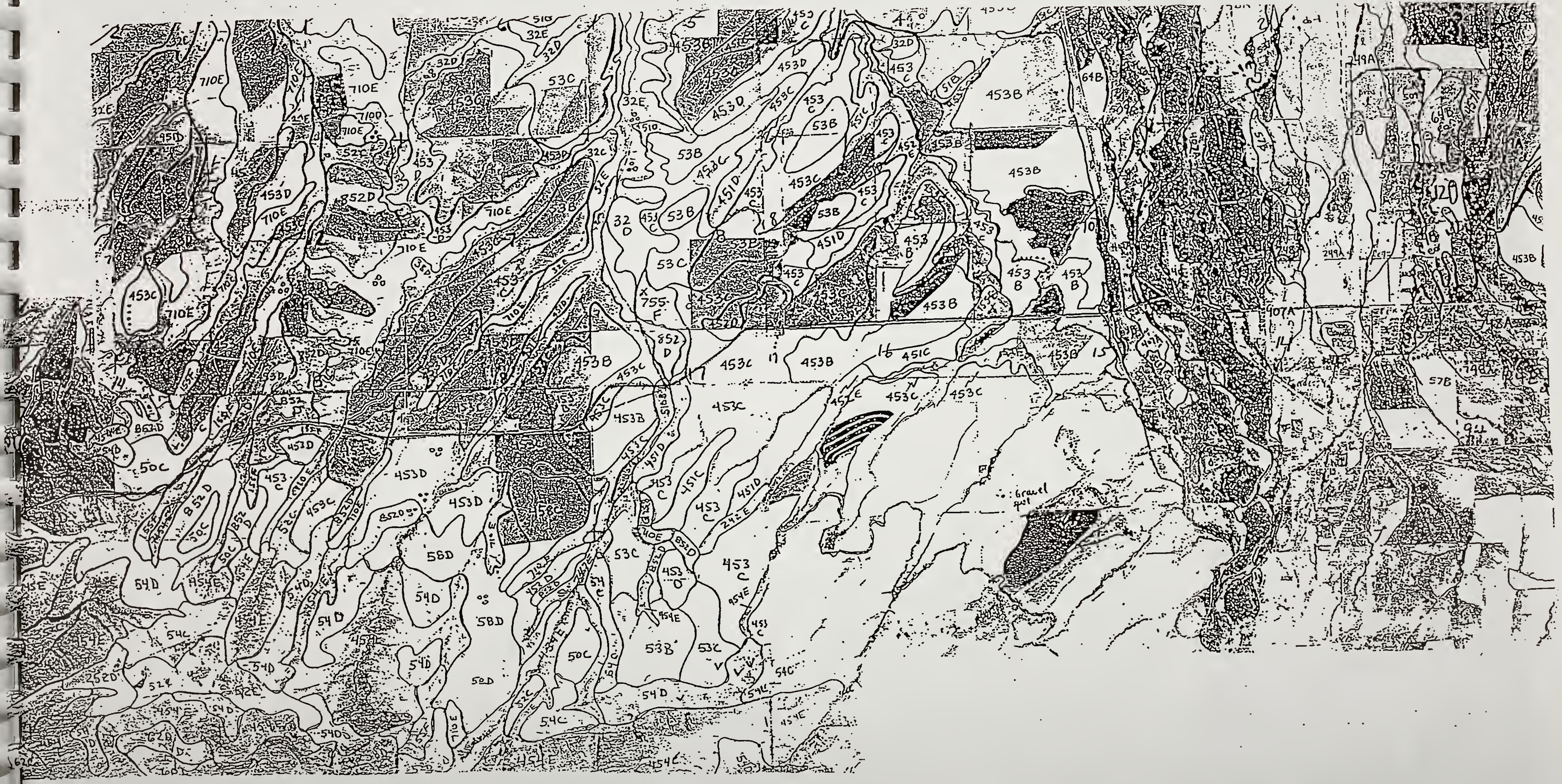
Individual Federal agencies at the national level, may assign relative weights among the 13 site assessment criteria other than those shown in the FPPA rule. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total weight points at 160.

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the FPPA rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

Part VII: In computing the "Total Site Assessment Points", where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160. Example: if the Site A maximum is 200 points; and alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site "A."}$$

SS:Q:ENV:43.gg



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gravel
pit

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
215 NORTH 17TH STREET
OMAHA, NEBRASKA 68102-4978

December 13, 1996

MASTER FILE COPY

CC: Jason Giard
Karl Helvik

REPLY TO
ATTENTION OF

U.S. Army Corps of Engineers
Federal Building, 301 South Park
Room 283, Drawer #10014
Helena, Montana 59626

RECEIVED
DEC 16 1996
ENVIRONMENTAL

Joel M. Marshik, P.E.
Manager, Environmental Services
Montana Department of Transportation
2701 South Prospect
P.O. Box 201001
Helena, Montana 59620-1001

Dear Mr. Marshik:

This letter is in reference to a proposed commercial - residential development in Bozeman, Montana. Mr. Roger Craft of Rajah and Associates is the project proponent. We have coordinated with Mr. Craft and Mr. Craft has been in contact with your office concerning a proposal for mitigation of adverse impacts to aquatic resources.

This letter is to confirm that the mitigation proposal being presented by Mr. Craft is acceptable to our office. The plan also provides an opportunity for the Department of Transportation (MDT) to create/enhance approximately four (4) acres of wetlands that MDT could apply as credit for another highway project that would involve adverse impacts to aquatic resources.

If you have any questions on this letter, please contact me or Doug McDonald at (406) 441-1375.

Sincerely,

Robert E. McInerney

Robert E. McInerney
Montana Program Manager

CF: Rajah & Assoc.

Printed on Recycled Paper

Montana Fish, Wildlife & Parks

Joel Marshik
Environmental Manager
Department Of Transportation
2701 Prospect
POB 201001
Helena, MT 59620

April 15, 1998

REF: RICEVILLE HILL
CONTROL No. 2021

Dear Joel:

This letter is to confirm that Montana Fish, Wildlife and Parks concurs with using property at Lewis and Clark Caverns for replacement property to satisfy 6(f) and 4(f) mitigation for land MDOT will impact on Sluice Boxes State Park as part of the Riceville Hill realignment project.

This concurrence is contingent on successful negotiation with the landowner for acquisition of the property at Lewis and Clark Caverns and final approval from the National Park Service for 6 (f) mitigation. These approvals will not hold up commencing work on the project as FWP has already initiated the process to transfer title to the easement needed at the Riceville location. I have explained to the Park Service the need to move forward with the Riceville Hill project. If negotiations are unsuccessful alternate replacement property must be found.

Please forward the following so I can send them to the NPS for review, a copy of the 4(f) documentation you have prepared for the project, a copy of the appraisal for the property in the Sluice Boxes that is affected and a copy of the EA prepared for the project.

If you have questions please call.

Sincerely,

Ken Soderberg
Management Bureau
Parks Division

C: Karl Helvig- MDOT
Debbie Dils- FWP

Montana Fish, Wildlife & Parks

RECEIVED

APR 3 0 1998

ENVIRONMENTAL

Joel Marshik, PE
Environmental Services Manager
Montana Department of Transportation
Box 201001
Helena MT 59620-0701

April 27, 1998

Dear Joel,

I have sent the documentation to the NPS for the Riceville Hill project using land adjacent to Lewis and Clark Caverns as replacement property. I have discussed this project with the National Park Service as well as MDOT's desire to use the remaining value on the Mother El parcel as replacement for other FWP sites MDOT will impact that are encumbered with LWCF funding. The remaining value of the replacement property can be used against the other projects. Upon approval of the Riceville Hill 6(f) I should receive a letter from NPS to that affect. You will have one year to carry this value over to other projects. We will need appraisals of the properties involved and will need the copies of the environmental documentation you will be preparing.

Sincerely,

Ken Soderberg
Resource Program Manager
ASLO- LWCF Program

C: Debby Dils
Doug Monger
✓ Karl Helvig- MDOT

FOUR CORNERS WEST
F 84-4(6)22
PUBLIC HEARING INPUT FORM

On **April 14, 1998** an information meeting was held on the proposed highway improvements project for Four Corners West. This form is made available to the public for submission of written input concerning the proposed project.

The input on this form is submitted by (please print clearly):

X	An Individual Citizen	____	An Organization
Name	GEORGE ALBERDA	Name	
Address	27027 NORRIS RD	Address	
City	BOZEMAN	City	
		Signed By:	
		Position:	

You may write your input on this form and leave it with the Project Manager tonight or take it with you and mail it on or before **April 28, 1998** to:

Four Corners West
c/o Winston Dyer, PE
Forsgren Associates, Inc.
PO Box 1032
West Yellowstone, MT 59758

PLEASE RECONSIDER YOUR PLANS ON THE SECTION RUNNING PAST THE GOLF COURSE. A DISTURBENCE IN THAT AREA WOULD EFFECT THE ENTIRE COURSE.

THANK YOU

(over or additional as necessary)

RECEIVED
MAY 4
FORSGREN ASSOCIATES, PA

FOUR CORNERS WEST
F 84-4(6)22
PUBLIC HEARING INPUT FORM

On **April 14, 1998** an information meeting was held on the proposed highway improvements project for Four Corners West. This form is made available to the public for submission of written input concerning the proposed project.

The input on this form is submitted by (please print clearly):

✓	An Individual Citizen	____	An Organization
Name	Ron Moss	Name	
Address	27007 Norris Rd	Address	
City	Bozeman	City	
		Signed By:	
		Position:	

You may write your input on this form and leave it with the Project Manager tonight or take it with you and mail it on or before **April 28, 1998** to:

Four Corners West
c/o Winston Dyer, PE
Forsgren Associates, Inc.
PO Box 1032
West Yellowstone, MT 59758

I believe that the stretch of road that runs from just west of Sheds Bridge needs to go to the south of present road to the Intersection of Norris & Churchill Roads. Reasons are: Power lines already need to be moved so lets move it a little more south than proposed If it remains as is my property looks to me like I will loose 50-60' out of my front yard, plus my wife would loose most of her

(over or additional as necessary)

parking for the business that she operates at our place. If this happens she will be out of business, or possibly the state of Montana would have to buy her out, which is not something we are very happy about either. This has been a dream of my wife to own a business & for the two years she has had it here at this residence, she has been very successful. We also would possibly have to drill a new well since it looks to me that our present well would be in the new right of way. If this goes through as presented & a new well put in, there would be no room to put it & keep it 100' away from our drain, this would not comply with state law. So in the long run we suggest that the road be moved south as this will be a lot less expensive than leaving it as is & possibly buying out a business, new trees & hedge & also a well, as well as the cost of replacing a golf course & my brothers house down the road.

Sincerely Ron + Cheri
Moss

RECEIVED

FORSGREN ASSOCIATES, P.A.

FOUR CORNERS WEST
F 84-4(6)22
PUBLIC HEARING INPUT FORM

On **April 14, 1998** an information meeting was held on the proposed highway improvements project for Four Corners West. This form is made available to the public for submission of written input concerning the proposed project.

The input on this form is submitted by (please print clearly):

____ An Individual Citizen		____ An Organization	
Name	Edward J. Miller	Name	
Address	28373 NORRIS Rd	Address	
City	Bozeman Mt 59718	City	
		Signed By:	
		Position:	

You may write your input on this form and leave it with the Project Manager tonight or take it with you and mail it on or before **April 28, 1998** to:

Four Corners West
c/o Winston Dyer, PE
Forsgren Associates, Inc.
PO Box 1032
West Yellowstone, MT 59758

28373 NORRIS Rd - The new road easement will be within 8 feet of our bedroom. Friday 4-24-98 - Surveyors Put a stake in our yard marking the road easement. No one has been by to talk to us yet. This is, we feel, to close. It will take a large tree and 6 lilack bushes - protection + sound. We need to ~~talk~~ talk. Also where did my drive way go to?

Also we own a home across the street west of our home. The road easement will be at the front door. It will take the well- and I think part of the sept system. When will someone be by?

(over or additional as necessary)

RECEIVED
MAY 4
FORSGREN ASSOCIATES, PA

FOUR CORNERS WEST
F 84-4(6)22
PUBLIC HEARING INPUT FORM

On **April 14, 1998** an information meeting was held on the proposed highway improvements project for Four Corners West. This form is made available to the public for submission of written input concerning the proposed project.

The input on this form is submitted by (please print clearly):

✓	An Individual Citizen	___	An Organization
Name	Donald + Dorothy Moss	Name	
Address	26509 Norris Rd.	Address	
City	Bozeman, Mt. 59718	City	
		Signed By:	
		Position:	

You may write your input on this form and leave it with the Project Manager tonight or take it with you and mail it on or before **April 28, 1998** to:

Four Corners West
c/o Winston Dyer, PE
Forsgren Associates, Inc.
PO Box 1032
West Yellowstone, MT 59758

I am writing this letter concerning my property at 26509 Norris Rd. The East side of my home is now about 100' from the existing right of way, as we understand we have been told by others, the new right of way will be [illegible] my door. As far as we're concerned this is much too close. It is our opinion along with several of our neighbors that any widening of the road should be done on the South side of the highway, Norris Road all the way to the Cross-

(over or additional as necessary)

hurchill road intersection. The homes [illegible] on the south side of the road need to be moved anyway, so it would make more sense to me that the road be moved that way also. By moving the road expansion to the south it would effect one home on the south, that being the trailer home of Jaw Bone ranch. From there to the Norris-Churchill junction farm fields & small ranchettes of 20 acres. On the north side of the highway lies a golf course, a beauty shop, my home farm fields, and a neighbors home who is farther off the highway than my home. I would also like to address the situation with the golf course. I am employed at the golf course as the superintendent. From what we have learned about the new right of way, we will be losing several greens and tees, and altering irrigation systems. If we have to rebuild part of the course to accomodate a newer highway we will be losing a lot of revenue, simply because people will not want to play on temporary greens or tees or possibly a 15 or 16 hole golf course, or a shorter course. In all likely hood we will be losing revenue do to construction anyway, but by building the highway to the south, we can still have a golf course that will not have to be rebuilt, and keep revenue loss to a minimum.

In the 6 years since we were first told about the project, no one has ever come and talked to any of us landowners about what was being proposed. I would like to ask that before this project gets too far along in planning that someone come and talk to us, and look very closely & seriously about moving the section of the project to the south side of Norris Road.

I do think that Norris Rd does need to be widened [illegible] more than anything. I do not like this project because of the increase in traffic and speed this highway will bring. You can tell us that you are not doing this to create truck traffic this way, but I don't believe it. You Build It, They Will Use It.

We already see an increase in traffic by semis. [illegible] [illegible] recently my home is shaking, and now we want to put it closer to my home. I think there are other highways that could be redone that have a lot more traffic on them than [illegible] Rd. (Example: [illegible] Highway 191 [illegible] 4-Corners to the Canyon [illegible]).

I think first it is really important that we get the problem with the section of [illegible] Road from [illegible] Road to the Interchange cleared up [illegible] [illegible] solution.

Thank you
Lee [illegible]
25509 [illegible] Rd.
Bozeman, Mont.

RECEIVED
AUG 05 1998
ENVIRONMENTAL

MASTER FILE
COPY

Montana Fish, Wildlife & Parks

1400 S. 19th
Bozeman, MT 59718

August 3, 1998

Joel M. Marshik, P.E.
Manager-Environmental Services
Montana Department of Transportation
2701 Prospect Ave.
P.O. Box 201001
Helena, MT 59620-1001

Dear Mr. Marshik:

I offer the following comments on an environmental assessment on Project No. STPP 84-4(9)22, Four Corners - West, which apparently will require the acquisition of .6 acres of the Shedd's Bridge Fishing Access Site (FAS) for a highway project.

Reference is made under 3.19 SECTION 4(f) AND 6(f) PROPERTIES, page 35, for proposed mitigation to include construction of a boat ramp and property acquisition at the Shedd's Bridge FAS. Montana Fish, Wildlife & Parks does not feel either of these proposals have merit. FASs above and below Shedd's Bridge FAS do not have boat ramps so putting a boat ramp in at Shedd's Bridge would not be logical at this time. Also, the river characteristics at this site do not lend themselves to a boat ramp. The acquisition of additional land at this site is also unnecessary.

Montana Department of Transportation recent acquisition of the Motheral Placer property adjacent to Lewis & Clark Caverns State Park is probably sufficient mitigation for the proposed project that will result in the taking of approximately .6 acre at the Shedd's Bridge FAS.

Thank you for the opportunity to comment.

Sincerely,

Jerry Walker

Jerry Walker
Regional Parks Manager

c: Ken Soderberg
Tom Greason
Bruce Rich
Pat Byorth

APPENDIX C

"NATIONWIDE" PROGRAMMATIC SECTION 4(f) EVALUATIONS

MONTANA DIVISION

"NATIONWIDE" *SECTION 4(f)* EVALUATION FOR MINOR IMPACTS
ON
HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project # F-STPP 84-4(6)22, (P.M.S. C# 1831)

Date: April 28, 1999

Project Name: FOUR CORNERS - WEST

Location: Pine Butte School
Gallatin County

NOTE: Any response in a box requires additional information.
Consult the "Nationwide" Section 4(f) Evaluation criteria.

	YES	NO
1. Is the *4(f)* site adjacent to the existing highway?	X	☐
2. Does the proposed project require the removal or alteration of historic structures, and/or objects?	☐	X
3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover?	☐	X
4. Is the impact on the *4(f)* site considered minor (i.e.: no effect; or no adverse effect)?	X	☐
5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation?	X	☐
6. Is the proposed action under an Environmental Impact Statement (E.I.S.)?	☐	X
7. Is the proposed project on a new location?	☐	X
8. The Scope-of-Work for the proposed project is one of the following:	X	☐

a) Improved traffic operation;
b) Safety improvements;
c) 3R;
d) Bridge replacement on essentially the same alignment; or
e) Addition of lanes.

ALTERNATIVES CONSIDERED

	YES	NO
1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent.	X	☐

NOTE: *Any response in a box requires additional information.*
Consult the "Nationwide" Section 4(f) Evaluation criteria.

ALTERNATIVES CONSIDERED (conclusion:)

	YES	NO
2. An **ALTERNATIVE** has been evaluated on the existing alignment which Improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent.	X	☐
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent.	X	☐
Descriptions of **ALTERNATIVES 2**. and **3**. are attached.	X	☐

MINIMIZATION OF HARM

	YES	NO
1. The proposed project includes all possible planning to minimize harm.	X	☐

2. Measures to minimize harm include the following:

The proposed construction limits are approximately 60 feet from the school. The proposed project will not impact the Pine Butte School.

COORDINATION

1. The proposed project has been **COORDINATED** with the following:

	YES	NO
a) SHPO (date: 1/27/94)	X	☐
b) Advisory Council on Historic Preservation (ACHP, date: 3/23/94)	X	☐
c) Property owner (NA)	NA	☐
d) Local/State/Federal agencies	NA	☐

List:

2. None of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:

SUMMARY

All required **ALTERNATIVES** have been evaluated and the proposed project meets all the criteria included in the "Nationwide Programmatic" *Section 4(f)* evaluation approved on December 23, 1986. This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.

Karl M Helvik

Date: 5/11/99

Karl M. Helvik, P.E.
Engineering Bureau Chief
Environmental Services

Approved: ______________ Date: 5-27-99
Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

KMH:BCB

cc:

Jason Giard, P.E. - Butte District Administrator
Carl S. Peil, P.E. - Preconstruction Engineer
Joseph P. Kolman, P.E. - Bridge Engineer
Thomas E. Martin, P.E., Chief, Right-of-Way Bureau
David W. Jensen, Supervisor - Fiscal Programming Section
Mark A. Wissinger, P.E., Supervisor - Contract Plans Section
Joel M. Marshik, P.E., Manager - Environmental Services

“Nationwide” Section 4(f) Evaluation for Minor Impacts on Historic Sites

Descriptions of Alternatives 2 and 3

Alternative 2

An alternative which improves the highway without any 4(f) impacts but is not considered feasible and prudent would be to leave the roadway as is. The present width of this section of the road has a paved roadway width of 7.3 meters (24 feet). This width is too narrow to safely accommodate present and future needs and does not meet current standards.

Alternative 3

An alternative on a new location avoiding the 4(f) site has been evaluated and is not considered to be feasible and prudent. Any new location for the roadway in order to avoid the 4(f) site would not be reasonable due to continuity of the roadway, costs and possible environmental impacts.

Advisory
Council On
Historic
Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

Reply to: 730 Simms Street, #401
Golden, Colorado 80401

MONTANA DEP[illegible]
REC[illegible]
MAR 30 1994
HELENA, MONTANA

March 23, 1994

Dale W. Paulson
Environmental Coordinator
Federal Highway Administration
Montana Division
301 South Park Street, Room 448
Helena, MT 59626

REF: No Adverse Effect determination for the reconstruction and widening of Montana Highway 84 west of Bozeman, Gallatin County, Montana

Dear Mr. Paulson:

We have reviewed the documentation regarding your no adverse effect determination for the above referenced undertaking. Under procedures set forth in 36 CFR Section 800.5(d)(2), the Council does not object to the finding of no adverse effect. This letter evidences that the requirements of Section 106 of the National Historic Preservation Act and the Council's regulations have been met for this project. It should be retained with all supporting documentation in your agency's environmental or project file.

If you have any questions or require the further assistance of the Council, please contact the Western Office at (303) 231-5320.

Sincerely,

Claudia Nissley
Director, Western Office
of Review

JAN 31 1994

MDT
Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor

Kathy

MASTER
FILE
COPY

40

RECEIVED
FEB 22 1994
ENVIRONMENTAL BUREAU

January 27, 1994

Marcella Sherfy
State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

Subject: F 84-4(6)22
Four Corners - West
Control No. 1831

Enclosed is the Determination of Effect for the above project. We are requesting your concurrence that the proposed Four Corners - West project would have **No Adverse Effect** to the Pine Butte School (24GA810).

If you have any questions, please contact Jon Axline at 444-6258.

Gordon J. Stockstad, Acting Chief
Environmental & Hazardous Waste Bureau

GJS:JA:D:ENV:13.gg

Enclosure

cc: Jason R. Giard, P.E., Butte District Engineer
Carl S. Peil, P.E., Preconstruction Bureau

CONCUR
MONTANA SHPO
DATE 2/15/94 SIGNED K. Huppe

MONTANA DIVISION

"NATIONWIDE" *SECTION 4(f)* EVALUATION
FOR MINOR USAGE OF
PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND WATERFOWL REFUGES

Project # F-STPP 84-4(6)22, P.M.S. C# 1831 Date: April 28, 1999

Project Name: FOUR CORNERS - WEST Location: Shedd's Bridge Fishing Access

Gallatin County

NOTE: *Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.*

		YES	**NO**
1.	Is the *4(f)* site adjacent to the existing highway?	X	☐
2.	Does the amount and location of the proposed impact area impair the use of the remaining *Section 4(f)* land for its intended purpose?	☐	X
3.	Does the proposed project require more than a minor amount* of the *Section 4(f)* site for Right-of-Way?	☐	X
4.	Are there any proximity impacts which would impair the use of the *4(f)* lands for their intended purpose (defined as "constructive use")?	☐	X
5.	Have the officials with jurisdiction over the property agreed in writing with the assessment of impacts and the proposed mitigation?	X	☐
6.	Have Federal funds — such as the *National Land & Water Conservation Fund - Section 6(f)* — been used for the acquisition of, or improvements to the *4(f)* site?	☒	
	If yes — has the land conversion/transfer been coordinated with the appropriate Federal agency, National Parks Service —	X	☐
	and are they in agreement?	X*	☐

The National Park Service has designated the Montana Department of Fish Wildlife and Parks as the agency responsible for administering the L&WCF program at the State level, and coordinating the land conversion.

		YES	**NO**
7.	Is the proposed action under an Environmental Impact Statement (E.I.S.)?	☐	X
8.	Is the proposed project on a new location?	☐	X
9.	The Scope-of-Work for the proposed project is one of the following: a) Improved traffic operation; b) Safety improvements; c) 3R; d) Bridge replacement on essentially the same alignment; or e) Addition of lanes.	X	☐

- -

*NOTE: MDT's guidelines for "minor amounts" of Right-of-Way (including Construction Permits) are limited to either 10% of a parcel under 10 hectares (25 acres), or 1% of a parcel equal to or greater than 10 hectares (25 acres) in size.

NOTE: *Any response in a box requires additional information. Consult the "NATIONWIDE" SECTION 4(F) EVALUATION criteria.*

ALTERNATIVES CONSIDERED

	YES	NO
1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent.	X	☐
2. An **ALTERNATIVE** has been evaluated which improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent.	X	☐
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent.	X	☐
Descriptions of **ALTERNATIVES 2.** and **3.** are attached.	X	☐

MINIMIZATION OF HARM

	YES	NO
1. The proposed project includes all possible planning to minimize harm.	X	☐
2. Measures to minimize harm include the following:		
a) Replacement of the lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.	X	
b) Replacement of facilities impacted including sidewalks, paths, benches, lights, trees, and other facilities.	X	
c) Restoration/landscaping of disturbed areas.	X	
d) Special design features.		X
e) Payment of, or improvements to the remaining *4(f)* lands equal in cost to fair market value.	X	
f) Other measures.		X

COORDINATION

	YES	NO
1. The proposed project has been coordinated with the Federal, state, and/or local officials having jurisdiction over the *4(f)* lands.	X	☐

List:

MDFW&P date: 1/24/92, 1/30/92, 4/15/98, 4/27/98
USDoI – National Park Service date: 5/12/92, 6/17/92

	YES	NO
2) In the case of non-federal *4(f)* lands, the official with jurisdiction has been asked to identify any Federal encumbrances — and none exist.	X	☐
3) Coordination with the U.S. ARMY - Corps of Engineers has been completed, or a *Section 404* Permit (if applicable) is pending.	X	☐

SUMMARY AND APPROVAL

The proposed project meets all criteria under the "Nationwide Programmatic" *Section 4(f)* Evaluation approved on December 23, 1986, and is submitted pursuant to **49 U.S.C. 303**.

All required alternatives have been evaluated, and the findings made are clearly applicable to this proposed project.

This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

Karl M Helvik
Date: 5/11/99

Karl M. Helvik, P.E.
Engineering Bureau Chief
Environmental Services

Approved: ______________________ Date: 5-27-99
Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

KMH:BCB

Attachments

cc: Jason Giard, P.E. - Butte District Administrator
Carl S. Peil, P.E. - Preconstruction Engineer
Joseph P. Kolman, P.E. - Bridge Engineer
Thomas E. Martin, P.E., Right-of-Way Bureau Chief
David W. Jensen, Supervisor - Fiscal Programming Section
Mark A. Wissinger, P.E., Supervisor - Contract Plans Section
Joel M. Marshik, P.E., Manager - Environmental Services